City of Franklin VIRGINIA
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DEPARTMENT OF COMMUNITY DEVELOPMENT
PLANNING - BUILDING INSPECTIONS – ZONING

SOUTHAMPTON COUNTY, VIRGINIA 1749

2015 Code Changes based on ICC and the Virginia Uniform Statewide Building Code

To: Contractors, Developers and Citizens

From: Mr. Donald E. Goodwin, CBO, CFM
Director of Community Development

CC: Phil Sherman, Deputy Code Official

Date: April 22, 2019

REFERENCE: 2015 Code Change Guide

I am pleased to provide you with this guide that highlights the most significant 2015 code changes for all the state and ICC model codes. These changes are not all inclusive but are those that are the most notable based on your trade. In the table of contents, you may click on the module link and it will take you directly to that particular module. Once you have completed that module you can click "Home" and it will return you to the top of the document. Please send us an email letting us know if this information is helpful. You may also follow this link to contact the Community Development office personnel for any questions you may have.
https://www.franklinva.com/government/departments/community-development/

I would like to thank all the Staff at DHCD and the members of the Virginia Building and Code Officials Association for all your hard work in putting this together.

To preface the code change guide, please note the following:

Introduction

The *Virginia Uniform Statewide Building Code* (USBC) is a state regulation promulgated by the Virginia Board of Housing and Community Development, a Governor-appointed board, for the purpose of establishing minimum regulations to govern the construction and maintenance of buildings and structures.

The provisions of the USBC are based on nationally recognized model building and fire codes published by the International Code Council, Inc. The model codes are made part of the USBC through a regulatory process known as incorporation by reference. The USBC also contains administrative provisions governing the use of the model codes and establishing requirements for the enforcement of the code by the local building departments and other code enforcement agencies.

In keeping with the designations of the USBC used previously, since the 2015 editions of the International Codes are incorporated by reference into this version of the USBC, it is known as the 2015 edition of the USBC.

Arrangement

The USBC is part of the *Virginia Administrative Code* (VAC), the official compilation of state regulations published under the authority and guidance of the Virginia Code Commission. Due to the difference in the section numbering system between the VAC and the model codes incorporated by reference into the USBC, the UBSC utilizes a dual section numbering system. In the USBC, the VAC section numbers are listed first, followed by a section number matching the model code system. In this printing of the USBC, the VAC section numbers are omitted and only the model code numbering system is utilized. The version of the USBC containing both the VAC section numbers and the model code numbering is available from the Virginia Department of Housing and Community Development (DHCD) and may also be accessed through the website of the Virginia Code Commission or by subscription to the VAC

Overview

The USBC is divided into three stand-alone parts. Part I contains regulations specific to the construction of new buildings and structures and is known as the *Virginia Construction Code*. Part II contains regulations specific to the rehabilitation of existing buildings, including repair, alterations, additions and change of occupancy in existing buildings and structures, and is known as the *Virginia Existing Building Code*. Part III of the USBC contains the regulations for the maintenance of existing structures which is enforced at the option of the local governments. It is known as the *Virginia Maintenance Code*.

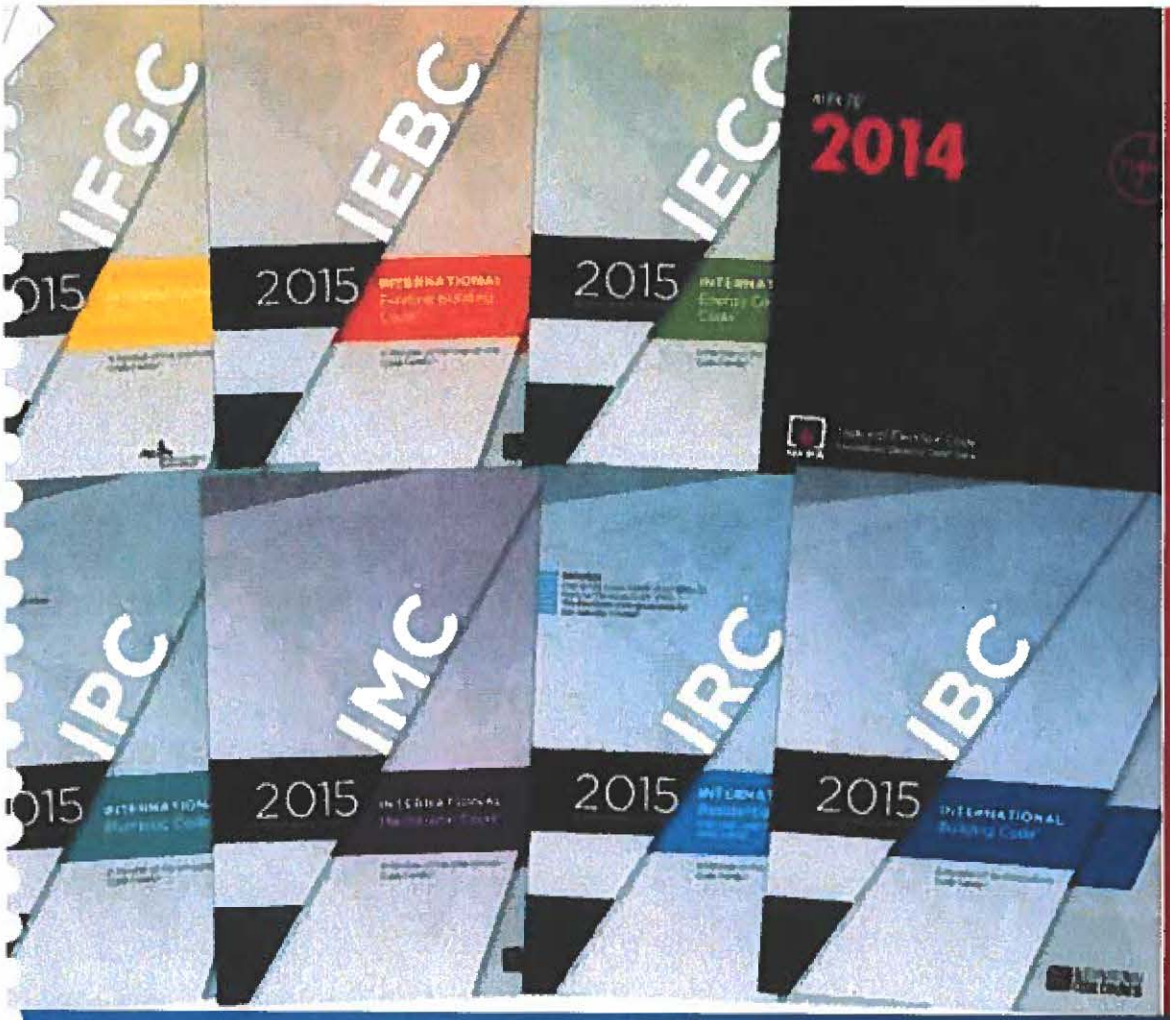
Codes Purchased from ICC

The 2015 edition of the USBC is being made available in pamphlet form as in past editions of the USBC. In addition to the pamphlet form of the USBC published by DHCD, the International Code Council (ICC) publishes versions of the *Virginia Construction Code*, *Virginia Existing Building Code*, *Virginia Maintenance Code* and a series of Virginia-specific trade codes. In the ICC published versions, marginal markings are provided to distinguish between text which is part of the International Codes and text which is part of the state regulations. Double vertical lines in the margins within the body of the codes indicate state amendments to the International Codes. As in the standard printings of the International Codes, a single vertical line in the margins within the body of the code indicates a technical change from the previous edition of the International Codes. Deletions from the previous editions of the International Codes are indicated in the form of an arrow (➡) in the margin where an entire section, paragraph, exception or table has been deleted or an item in a list of items or a table has been deleted.

Technical Assistance

The local building departments and enforcing agencies may be contacted for further information concerning the USBC. Contact information for DHCD is below.

DHCD, Division of Building and Fire Regulation
State Building Codes Office
600 East Main Street, Suite 300
Richmond, Virginia 23219
Phone: (804) 371-7150—Email: sbco@dhcd.virginia.gov
Website: www.dhcd.virginia.gov



2015 Code Change Training Series

Companion Guide

4th Edition

Jack A. Proctor Virginia Building Code Academy

2015

Table of Contents

Welcome!

Welcome to the 2015 Virginia Code Change Update Training series, presented by the Jack A. Proctor Virginia Building Code Academy! This training series is designed to make you, the experienced code official, aware of significant changes to the administrative, building and fire codes as well as all related codes on both the state and national levels.

Code Change Training is mandatory for all Board of Housing and Community Development issued certificate holders, according to the 2015 Code Change Update Training Matrix. Through these training modules, we will highlight the most sweeping and significant changes to building codes as they pertain to administration and enforcement in the Commonwealth of Virginia. This training series and its companion guide are not inclusive of all changes to the codes and standards, and are not meant to serve as substitutes for the actual code documents themselves. Certificate holders are encouraged to review the changes that may not have been included in this series.

Whether you chose classroom learning, online, or both you will find this training companion guide as a useful resource while attending training as well as on the job afterwards.

Thank you for joining us, and we hope you enjoy your training experience!

About This Guide

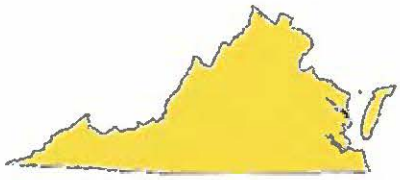
This guide is designed to make it easy for you to track, note, and follow up on code changes presented in the 2015 Code Change Training series. We hope you will explore the tools and features contained in this guide just for you.

- ❑ This training series and its companion guide are not inclusive of all changes to the codes, and are not meant to serve as substitutes for the actual code books. Certificate holders are encouraged to review the changes that may not have been included in this series.

- ❑ Quick Reference Guide: Keep track of the courses that you plan to take as well as the dates of those courses, by using this consolidated table.

- ❑ Code Tracker: We know that different codes are more important to some people than to others. This section includes a checklist of each code change presented in each training module. Every list is color coded, and corresponds to the same section later in this book. Use these checklists to note the code changes most important to you. This way they are all in one place for quick and easy reference!

- ❑ Course Companion: This section contains a brief summary of each code change presented in the 2015 Code Change Training series, and is color coded to match both the corresponding ICC code book cover and Code Tracker section.
  Note that code changes specific to the 2015 Virginia Uniform Statewide Building Code will be marked with a yellow Virginia icon:



2015 Code Change Update Training Matrix

2015 Code Change Training Requirements by Certification Type (1 of 2)	Building Official	Property Maintenance Official	Fire Official	Property Maintenance Inspector	Building Maintenance Inspector	Residential Building Inspector	Residential Plans Examiner	Commercial Building Inspector	Commercial Plan Examiner	Residential Electrical Inspector	Commercial Electrical Inspector	Electrical Plans Examiner	Residential Mechanical Inspector	Commercial Mechanical Inspector	Mechanical Plans Examiner
Administrative (Chapter 1, IBSR, VCS, ADI, Elevator, ISPSC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fire	✓		✓												
Mechanical/Fuel Gas	✓												✓	✓	✓
Electrical	✓									✓	✓	✓			
Plumbing	✓														
Building	✓		✓					✓	✓						
Residential	✓					✓	✓								
Property Maintenance	✓	✓	✓	✓	✓										
Energy	✓					✓	✓	✓	✓						
Existing Building	✓					✓	✓	✓	✓						

2015 Code Change Update Training Matrix

Residential Plumbing Inspector	Commercial Plumbing Inspector	Plumbing Plans Inspector	Combination Residential Inspector	Combination Commercial Inspector	Fire Prevention Inspector	Fire Protection Inspector	Fire Protection Plans Examiner	Elevator Inspector	Amusement Device Inspector	Permit Technician	Residential Energy Inspector	Residential Energy Plan Examiner	Commercial Energy Inspector	Commercial Energy Plan Examiner	**2015 Code Change Training Requirements by Certification Type (2 of 2)**
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Administrative (Chapter 1, IBSR, VCS, ADI, Elevator, ISPSC)
					✓										Fire
			✓	✓											Mechanical/Fuel Gas
			✓	✓											Electrical
✓	✓	✓	✓	✓											Plumbing
				✓		✓	✓			✓			✓	✓	Building
			✓							✓	✓	✓			Residential
															Property Maintenance
											✓	✓	✓	✓	Energy
					✓	✓									Existing Building

QUICK REFERENCE GUIDE

Course Tracker			
Course	**Date**	**Course**	**Date**
❑ **Administrative & all related codes**		❑ **Mechanical & Fuel Gas**	
❑ **Residential**		❑ **Energy**	
❑ **Building**		❑ **Property Maintenance**	
❑ **Electrical**		❑ **Plumbing**	
❑ **Fire**		❑ **Existing Building**	
❑ **Pools and Spas**		❑ **Elevator**	

Here you can record the trainings that you have completed, or those you plan to take. DHCD staff will keep track of your official records, which you can also track through your online profile on the JPVBCA Online System.

The following Code Tracker section gives you the opportunity to note the code sections mentioned in training that you wish to review later. Code changes are grouped by code family, and are additionally highlighted in the margin according to the color of the corresponding code book cover. This way it is easy to find a section in a quick glance!

2015 USBC Administrative and Related Codes

- ❑ 102.3 Code Exemption 1
- ❑ 102.3 Code Exemption 2
- ❑ 102.3 Code Exemption 3
- ❑ 102.3 Code Exemption 4
- ❑ 103.1.1 Virginia Existing Building Code
- ❑ 103.3-103.7 and VEBC 102.2
- ❑ 105.2.1 Qualifications of Technical Assistants; 105.2.2 Certification of Technical Assistants; and Chapter 2 Definitions
- ❑ 108.2 Exemptions from Application for Permit #1 Low Voltage Systems
- ❑ 108.2 Exemptions from Application for Permit #16 Billboard Safety Upgrades and to Add or Replace Steel Catwalks, Steel Ladders, or Steel Safety Cable
- ❑ 108.2 Exception to the Exemptions #2
- ❑ 113.7 Approved Inspection Agencies
- ❑ 117.2 Moved Buildings and Structures

2015 Virginia Amusement Device Regulations

- ❑ 13VAC5-31-75

2015 Virginia Construction Code

- ❑ 202 Change of Occupancy
- ❑ 202 Clinics, Outpatient
- ❑ 202 Coastal A Zone
- ❑ 202 Coastal High Hazard Area
- ❑ 202 Existing Structure
- ❑ 202 Private Garages
- ❑ 202 Substantial Improvement
- ❑ 303.1.1 Small Buildings and Tenant Spaces

- ❑ 304.1 Small Kitchens
- ❑ 304.1 Training and Skill Development
- ❑ 304.1.1 Licensed Day Support and Treatment Facilities
- ❑ 307.1 Exception 15 High-Hazard Group H
- ❑ 308.4 I-2 Conditions 1 and 2
- ❑ 310.5.2 Lodging Houses
- ❑ 406.3.1 Classification and 406.3.2 Clear Height
- ❑ 407.2.6 Cooking Facilities and 904.13 Domestic Cooking Systems-Group I-2 Condition 1
- ❑ 430 Higher Education Laboratories
- ❑ Tables 504.3 and 504.4 Building Height and Number of Stories
- ❑ 717.5.3 Shaft Enclosures
- ❑ 717.6.2.2 Equipment Shutdown
- ❑ 903.2.1.6 Assembly Occupancies on Roofs
- ❑ 903.3.5.1.1 Limited Area Sprinklers Serving Less Than 20 Heads
- ❑ 905.3.1 Stand Pipe Pressure
- ❑ 912.4 Fire Department Connection Access
- ❑ Table 1004.1.2 Maximum Floor Area Allowances per Occupant
- ❑ Table 1006.2.1 Spaces with One Exit or Exit Access Doorway
- ❑ 1007.1.1.1 Measurement Point
- ❑ 1008.3.3 Rooms and Spaces
- ❑ 1010.1.9.3 Locks and Latches
- ❑ 1010.1.9.8 Sensor Release of Electrically Locked Egress Doors
- ❑ 1010.1.9.9 Electromagnetically Locked Egress Doors
- ❑ 1016.2 Egress Through Intervening Spaces
- ❑ 1018.3 Aisles in Groups B and M
- ❑ 1023.3.1 Stairway Extension
- ❑ 1023.5 and 1024.6 Penetrations
- ❑ 1104.4 Multistory Buildings and Facilities
- ❑ 1107.3 and 1107.4 Accessible Spaces and Routes
- ❑ 1107.5.1.1 and 1107.6.4.1 Accessible Units in Assisted Living Facilities
- ❑ 1107.6.1.1 Accessible Units (Group R-1)
- ❑ 1109.2.3 Lavatories
- ❑ 1110.1 General (Recreational Facilities)
- ❑ 1405.3 Vapor Barriers; 1405.3.2 Class III Vapor Retarders; and 1405.3.3 Material Vapor Retarder Class
- ❑ 1601.3 Roof Snow Load Data
- ❑ 1603.1.7 Flood Design Data
- ❑ 1603.1.8.1 Photovoltaic Panel Systems and 1607.12.5 Photovoltaic Panel Systems

- ❑ 1704.2 Special inspections, Exceptions
- ❑ 1704.5 Submittals to the Building Official
- ❑ 1705.2.3 Open-Web Steel Joists and Joist Girders
- ❑ 1705.3 Concrete Construction
- ❑ 1711.1 Joist hangers
- ❑ 1804.1 Excavation Near Foundations
- ❑ 1904.1 Structural Concrete
- ❑ 2101.2 Design Methods
- ❑ 2103 Masonry Construction Materials; 2104 Masonry Construction; and 2105 Masonry Quality Assurance
- ❑ 2111 Masonry Fireplaces and 2113 Masonry Chimneys
- ❑ 2210.1.1.3 Composite Slabs on Steel Decks
- ❑ 2211.1 General
- ❑ 2303.1.4 Structural Glued Cross-Laminated Timber
- ❑ Tables 2308.4.1.1(1) and (2)
- ❑ Tables 2308.7.1(1) and (2) for Ceiling Joist Spans; and Tables 2308.7.2(1), (2), (3), (4), (5), and (6) for Rafter Spans
- ❑ Tables 2308.8(1) and (2); 2308.10.2(1) and (2); 2308.10.3(1), (2), (3), (4), (5) and (6)
- ❑ 2603.5.5 Vertical and lateral fire propagation
- ❑ 2612 Plastic Composites
- ❑ 3004 Hoistway Venting

2015 Virginia Residential Code

- ❑ Table R301.7 New Deflection Criteria
- ❑ R303.4 Mechanical Ventilation
- ❑ R308.4.2 Glazing Adjacent to Doors, R308.4.5 Glazing and Wet Surfaces
- ❑ R308.4.7 Glazing adjacent to Bottom Stair Landing
- ❑ R310.3.2.1 Drainage Required for Bulkheads
- ❑ R310.5, 310.6 EERO for Additions, Alterations, and Repairs
- ❑ R312.1.2 Guard Height
- ❑ R331 Interior Passage
- ❑ R314 Smoke Alarms
- ❑ R322.1, 322.2 Flood Hazards
- ❑ R322.3 Coastal High-Hazard Areas
- ❑ R404.1.1 Design Required (foundation walls)
- ❑ R408.2 Openings for Under-Floor Ventilation
- ❑ R507.2 Deck Ledger Connection to Band Joist

- ❑ R602.7 Headers, Header Tables
- ❑ R602.7.1 Single Member Headers
- ❑ R802.2 Design and Construction
- ❑ R1003.18 Chimney Clearances

2015 Virginia Energy Conservation Code

- ❑ R401.2 Compliance
- ❑ R402.1.1 /N1102.1.1 Vapor Retarder
- ❑ R402.1.3/N1102.1.3 R-Value Computation
- ❑ R402.2.8/N1102.2.8 Floors
- ❑ R402.4.2/N1102.4.2 Fireplaces
- ❑ R402.4.4 Rooms Containing Fuel-Burning Appliances
- ❑ R403.3.3/N1103.3.3 Duct Testing
- ❑ R403.3.5/N1103.3.5 Building Cavities
- ❑ R404.1/N1104.1 Lighting Equipment
- ❑ R405.5.2/N1105.5.2 Residence Specifications
- ❑ C402.1.1 Low-Energy Buildings (exemptions)
- ❑ C402.1.2 Equipment Building (exemptions)
- ❑ C402.2.3 Thermal Resistance of Above-Grade Walls
- ❑ C402.4.3 Maximum U-Factor
- ❑ C402.5.3 Rooms containing fuel-burning appliances
- ❑ C402.5.7 Vestibules
- ❑ Table C403.2.3 Minimum Efficiency Requirements
- ❑ C403.2.6.3 Ventilation
- ❑ Table C403.2.14 Minimum Efficiency Requirements: Commercial Refrigeration
- ❑ C403.2.15 – C403.2.17 Coolers, Freezers and Refrigeration
- ❑ C404.4 Insulation of Piping (service water heating)
- ❑ C404.5 Efficient Heated Water Supply Piping
- ❑ C404.6 Heated-Water Circulating and Temperature Maintenance Systems
- ❑ C405.2.1 Occupant Sensor Controls
- ❑ C405.2.1.1 Occupancy Sensor Control Function
- ❑ C405.2.2 Timed Switch Controls
- ❑ C405.2.2.1 Timed-Switch Control Function
- ❑ C405.2.3 Day Lighting Controls
- ❑ C405.4.2 Interior Lighting Power
- ❑ C405.6 Electrical Energy Consumption (Mandatory)
- ❑ C405.7 Electrical Transformers Mandatory

- ❑ C405.8 Electrical Motors Mandatory
- ❑ C405.9 Vertical and Horizontal Transportation Systems and Equipment
- ❑ C405.9.1 Elevator cabs
- ❑ C405.9.2 Escalators and Moving Walks
- ❑ C406 Additional Efficiency Package Options; and new list

2015 Virginia Existing Building Code

- ❑ VCC 103.1.1
- ❑ VEBC Table of Contents
- ❑ 101.5 Use of Terminology and Notes
- ❑ Throughout – References to IFC construction requirements deleted
- ❑ Throughout – Deleted references to "dangerous" and "unsafe" provisions
- ❑ Throughout – Deleted "subject to the approval of the building official"
- ❑ 102.2 Scope
- ❑ 103.10 Construction Documents
- ❑ 202 Existing Building
- ❑ 202 Change of Occupancy
- ❑ 202 Repair
- ❑ 202 Work Area
- ❑ 302 Building Materials and Systems
- ❑ 303 Fire Escapes
- ❑ 304 Glass Replacement and Replacement Windows
- ❑ 306 Group B Teaching and Research Laboratories
- ❑ 307 Reroofing and Roof Repair
- ❑ Deletion – Smoke alarm retrofit requirements eliminated from 2012 VRC sections 402.5, 403.6, and 1104.1
- ❑ 402 Change of Occupancy
- ❑ 403 Additions
- ❑ 404 Alterations
- ❑ 404.3 Alterations Affecting an Area Containing a Primary Function
- ❑ 405 Historic Buildings
- ❑ Chapter 5 Repairs
- ❑ 501.1 Exception
- ❑ 602 Level 1 Alterations
- ❑ 603 Level 2 Alterations
- ❑ 604 Level 3 Alterations

- ❑ Alteration Provisions for Reroofing
- ❑ Chapter 7 Change of Occupancy
- ❑ 701.1 Exception
- ❑ 701.1 Scope
- ❑ 701.2 Work Undertaken in Connection with a Change of Occupancy
- ❑ 710.1 Exception
- ❑ Chapter 8 Additions
- ❑ Chapter 9 Historic Buildings
- ❑ Chapter 10 Moved Buildings
- ❑ Chapter 11 Retrofit Requirements
- ❑ Chapter 12 Construction Safeguards
- ❑ Chapter 13
- ❑ Chapter 14 Compliance Alternative for Change of Occupancy

2015 Virginia Property Maintenance Code

- ❑ 104.5.4.3 Notice of Violation
- ❑ 104.5.6 Written Notice for Legal Proceedings
- ❑ 106.7 Local Board of Building Code Appeals
- ❑ 202 Definitions
    - o Applicable Building Code, Maintained, Cost of Such Demolition or Emergency Repairs, Historic Building
- ❑ 505.5 Nonpotable Water Reuse Systems
- ❑ 603.1 Equipment
- ❑ 604.3.2.1 Electrical equipment
- ❑ 606.1 Elevators, Escalators, and Dumbwaiters

2015 USBC Elevator Provisions and Related Codes

- ❑ USBC 102.3 (5) Exemptions
- ❑ VCC 3001.2 Referenced Standards
- ❑ VCC 3002.9 Plumbing and Mechanical Systems
- ❑ VCC 3004 Conveying Systems
- ❑ VCC 3005 Machine Rooms
- ❑ VCC 3006 Elevator Lobbies and Hoistway Opening Protection
- ❑ VECC C405.9.1 Elevator Cabs
- ❑ VECC C405.9.2 Escalators and Moving Walks
- ❑ VECC C405.9.2.1 Regenerative Drive
- ❑ VMC 606.1 General (elevators, escalators, and dumbwaiters)

2015 Virginia Mechanical & Fuel Gas Codes

- ❑ New Definition - Pollution Control Unit
- ❑ 304.11 Fall-Arresting Restraint Systems
- ❑ 307.3 Condensate Pumps in Uninhabitable Spaces
- ❑ 502.2 Manicure and Pedicure Stations
- ❑ 504.5/M1502.4.4 Dryer Duct Power Ventilators
- ❑ 505.3 Domestic Kitchen Exhaust Systems in Multistory Buildings
- ❑ 506.5.2 Pollution Control Unit
- ❑ 507.1 Type 1 Hood Installation
- ❑ 507.1.1.1 Heat Sensors for Multiple Commercial Kitchen Hoods
- ❑ 508.1.2 Air Balance for Commercial Kitchen Ventilation Systems
- ❑ 510.4, 510.5 Hazardous Exhaust Systems
- ❑ 607.6.2.2 Ceiling Radiation Dampers
- ❑ 701.2 Dampered Openings
- ❑ 802.9/M1804.4 Door Clearance to Vent Terminals
- ❑ 903.4 Gasketed Fireplace Doors
- ❑ 918.5 & 918.6 Outdoor and Return Air Openings
- ❑ 1102.3 Access Port Protection / 1101.10 Locking Caps Exception
- ❑ 1210 / M2105 Plastic Pipe Ground-Source Heat Pump Loop Systems
- ❑ M1305.1.3.1 Electrical Requirements for Appliances in Attics
- ❑ M1306.2.1 Labeled Assemblies
- ❑ M1308.2 Protection Against Physical Damage

Fuel Gas Only:

- ❑ 310.1 / G2411.1.1 CSST
- ❑ 403.6 Plastic Pipe, Tubing, and Fittings
- ❑ 404.5 Fittings in Concealed Locations
- ❑ 410.2 / G2421.2.7 Medium Pressure Regulators
- ❑ 503.4.1 / G2427.4.1 Plastic Piping

2015 Virginia Electrical Code (2014 NEC)

- ❑ NEC Code Wide Change – Voltage Increase
- ❑ NEC Art. 100 Definitions – Selective Coordination
- ❑ NEC Art. 100 Definitions – Intersystem Bonding Termination
- ❑ NEC Art. 100 Definitions – Separately Derived System
- ❑ NEC 110.16 – Arc Flash Hazard Warnings
- ❑ NEC 110.21(B) - Field Applied Hazard Markings
- ❑ NEC Code Wide Change – Lockable Disconnecting Means
- ❑ NEC 110.26 E(2)(a)&(b) Outdoor Installations
- ❑ Outdoor Dedicated Space
- ❑ NEC 200.4(B) – Neutral Conductor Grouping In Enclosures
- ❑ NEC 210.8(A)(7) & IRC E3902.7 – GFCI at Sinks
- ❑ NEC 210.8(A)(9)& IRC E3902.8 – GFCI Tubs and Showers
- ❑ NEC 210.8 (A)(10)& IRC E3902.9 – GFCI laundry Areas
- ❑ NEC 210.8(B)(8) – GFCI Garages
- ❑ NEC Art. 210.8 (D) – Dishwashers
- ❑ NEC 210.12 & IRC E3902.16 – AFCI Protection
- ❑ NEC 210.12(C) – AFCI Protection in Dormitories
- ❑ NEC 210.13 – Ground Fault Protection of Equipment
- ❑ NEC 210.17 & IRC E3702.13 – Electric Vehicle Branch Circuit
- ❑ NEC 210.52(E) 1,2,3 & E3901.7 – Outdoor Outlets
- ❑ NEC 210.52 (G)(1) & IRC E3901.9 – Garage Receptacles
- ❑ NEC 210.64 – Electrical Service Areas
- ❑ NEC 220.12 – Lighting Loads
- ❑ NEC 240.21(B)(1) Exception – Minimum Conductor Size
- ❑ NEC 250.64 (B) – Grounding Electrode
- ❑ NEC 250.66 (A) & (B) – Electrode Conductor Sizing
- ❑ NEC 250.68 (C)(3) – Grounding Electrode Connections
- ❑ NEC 250.102(C) – Bonding Conductors and Jumpers
- ❑ NEC 250.122 (B) – Size of Equipment Grounding Conductors
- ❑ NEC 300.22 (C)(1) – Wiring Methods
- ❑ NEC 300.38 – Raceways in Wet Locations Above Grade
- ❑ NEC 310.15(B)(7) & IRC E3603.1.1 - Service Entrance Conductors and Main Feeder Sizing
- ❑ NEC 314.15 – Damp & Wet Locations
- ❑ NEC 393 – Low Voltage Suspended Ceilings
- ❑ NEC 404.2 (C)& IRC E4001.15 – Neutral Conductors on Light Switches
- ❑ NEC 406.3 (E) – Controlled Receptacle Marking

- ❑ NEC 406.5 (E) – Receptacles in Counter Tops and Similar Areas
- ❑ NEC 406.9(B)(1) & IRC E4002.9 – Extra Duty Hoods
- ❑ NEC 406.15 & IRC 4002.15 – Dimmer Controlled Receptacles
- ❑ NEC 408.4 (B) – Supply Source Identification
- ❑ NEC 408.4 (B) – Retrofit Kits
- ❑ NEC 410.10 (F) - Luminaires Under Roof Decking in Exposed or Concealed Locations
- ❑ NEC 422.5 – Readily Accessible GFCI Devices
- ❑ NEC 422 – GFCI Protection
- ❑ NEC 422.49 – High Pressure Spray Washers
- ❑ NEC 422.51 (B) – GFCI on Hardwired Vending Machines
- ❑ NEC 424.66 (A)&(B) – Duct Heaters
- ❑ NEC 445 – Generators
- ❑ NEC 450 – Transformers
- ❑ NEC 501.40 – Multi-Wire Branch Circuits
- ❑ NEC 516 – Revised Title
- ❑ NEC 517.2 – Definitions
- ❑ NEC 517.18 (A) – Patient Bed Location – Receptacle Identification
- ❑ NEC 517.18 (B) – General Care Patient Bed Location – Number of Receptacles
- ❑ NEC 517.19 (B) – Critical Care Patient Bed Location – Number of Receptacles
- ❑ NEC 517.19 (C) – Operating Room – Number of Receptacles
- ❑ NEC 517.30 (B) – Separate Branches
- ❑ NEC 517.41 (E) –Essential Branch Receptacles
- ❑ NEC 600.6 (A) (1) – Sign Enclosure Disconnecting Means
- ❑ NEC 646 New Article – Modular Data Centers
- ❑ NEC 680.2 & IRC4201.2 – Storable/Portable Spas and Hot Tubs
- ❑ NEC 680.12 – Fountain Disconnect
- ❑ NEC 680.21 (C) – GFCI for Pool and Spa Motors
- ❑ NEC 680.22 (A) (1) – Required Receptacles for Pools
- ❑ NEC 680.22 (B) (6) & IRC E4203.4.3 – Low Voltage Luminaires
- ❑ NEC 680.42 (B) – Bonding Requirements/Exceptions
- ❑ NEC New 700.8 – Surge Protection
- ❑ NEC 700.19 – Emergency Lighting and Power Circuits
- ❑ NEC 728 New Article – Fire Resistant Cable Systems
- ❑ NEC 750 New Article – Energy Management Systems

2015 Virginia Plumbing Code

- ❑ 202 Alternate Onsite Nonpotable Water
- ❑ 202 Demand Recirculation Water System
- ❑ 202 Grease Interceptor – Fats, Oils, and Greases (FOG) Disposal System
- ❑ 202 Onsite Nonpotable Water Reuse System
- ❑ 202 Toilet Facility
- ❑ 202 Waste Receptor
- ❑ 202 Drinking Fountains, Water Coolers, and Water Dispensers
- ❑ 403.3 Required Public Toilet Facilities
- ❑ 404 Accessible Plumbing Facilities
- ❑ 410.2 Drinking Fountains in Small Occupancies
- ❑ 423.3 Footbaths, pedicure baths, and shampoo sinks
- ❑ 504.6 Temperature & Pressure Relief Discharge Piping
- ❑ 504.7.2 Water Heater Pan Drain Termination
- ❑ 601.5 Rehabilitation of Piping Systems by Internal Lining
- ❑ 603.3 Tracer Wire on Nonmetallic Supply Piping (VA Amendment)
- ❑ 605 Groove and Shouldered Mechanical Joints and Press-Connect Fittings
- ❑ 605.15.2 CPVC Solvent Cementing
- ❑ 605.7 Valve Compliance to Standards
- ❑ 607.2.1 Hot Water Circulation Systems
- ❑ 607.5 Insulation of Hot Water Supply Piping
- ❑ 608.8 Identification of Nonpotable water
- ❑ 702.5 Temperature Rating of Drainage Piping
- ❑ 705.14.2 Primer Exception for Solvent Cementing PVC 4 inches and smaller
- ❑ 716 Vacuum Drainage Systems
- ❑ 717 Replacement of Sewers by Pipe-Bursting Method
- ❑ 1002.1 Exception for Traps for Parking Garage Floor Drains
- ❑ 1002.4, 1002.4.1 Trap Seal Protection against Evaporation
- ❑ 1003.3.7 Direct Connection of Grease Interceptor Discharge
- ❑ 1106.2 Vertical Conductors and Leaders (Storm Drainage)
- ❑ Chapter 13 Notpotable Water Systems
- ❑ Chapter 14 – Subsurface Landscape Irrigation System

2015 Virginia Statewide Fire Prevention Code

- ❑ 107.2(1) Permits Required
- ❑ 107.2(2) Permits Required
- ❑ 301.3 Occupancy
- ❑ 305.5 Unwanted Fire Ignitions
- ❑ 312.3 Other Barriers
- ❑ 315.6 Storage in Plenums; and 605.12 Abandoned Wiring in Plenums
- ❑ 319 Mobile Food Preparation Vehicles
- ❑ 607.6 Water Protection of Hoistway Enclosures
- ❑ 609.3.3.2 Grease Accumulation
- ❑ 807 Decorative Material Other Than Decorative Vegetation in New and Existing Buildings
- ❑ 901.8.2 Removal of Existing Occupant-Use Hose Lines
- ❑ 1031.3.1 Group I-2
- ❑ 2004.7 Other Aircraft Maintenance
- ❑ 2808.3 Size of Piles
- ❑ 3103.2 Approval Required
- ❑ 3103.2.1 Multiple Tents
- ❑ 3105 Temporary Stage Canopies
- ❑ 5605.1.1 Permits
- ❑ 5706.1.1 Mobile Fueling Operations
- ❑ Appendices

2015 Virginia Swimming Pool and Spa Code

- ❑ Definitions
  - o Aquatic Vessel (removed)
  - o Deck
  - o Handhold
  - o Maintained Illumination
  - o Class F
  - o Safety Cover
  - o Outlet Cover
- ❑ 302.3 – Pipe, Fittings, and Components
- ❑ 303.1.1 – Heaters
- ❑ 303.2 – Portable Spas

- ❑ 303.3 – Residential Pools and Permanent Spas
- ❑ 305.2.9 – Equipment clear zone
- ❑ 306 – Decks
- ❑ 321 – Lighting
- ❑ 321.2 – Artificial Lighting Required
- ❑ 321.2.2 – Illumination Intensity
- ❑ 321.2.3 – Underwater Illumination
- ❑ 323 – Safety (Handrails)
- ❑ 402.14 – Springboard Fall Protection
- ❑ 412.2 – Emergency Telephone Signs
- ❑ 702.2.1 – Barrier Required
- ❑ 704 – Circulation Systems
- ❑ 810.2 – Pressure Test

Notes

SPECIAL SECTION: USBC Fundamentals Refresher

Note: This section presents a summary of existing administrative portions of the USBC, and related laws. The regulations discussed here are not necessarily changes new to the 2015 USBC, but rather a review of administrative provisions, broadly.

Tools of the Trade

Code Relationships

Precedence of Code

1. Chapter 1
2. Administrative provisions
3. Definitions
4. Technical amendments

- Legislative action directs DHCD to "Adopt and promulgate [a statewide building code…]"
- DHCD then develops the USBC through a public process involving multiple stakeholders throughout the Commonwealth
- The USBC then adopts and modifies the IBC, which incorporates by reference the rest of the body of codes

Scope and Purpose

USBC 102.1 Purpose

"...the purpose of the USBC is to protect the health, safety, and welfare of the residents of the Commonwealth of Virginia...provided that buildings and structures should be permitted to be constructed at the least possible cost consistent with recognized standards..."

- Health
- Safety
- Energy conservation
- Water conservation
- Prevention of overcrowding
- Prevention of pest infestation
- Prevention of garbage accumulation
- Access for handicapped and aged

USBC 102.2 Scope

The USBC supersedes the building regulations of all localities, including local provisions that:

- Regulate dwelling foundations or crawl spaces
- Require specific building materials
- Require minimum surface areas or number of windows.

The USBC does not supersede proffered conditions.

Be aware of what you proffer. When conditions are approved as part of a rezoning, those conditions are legally binding. Only City Council has the power to amend or vary approved conditions. Petitioners are cautioned to proffer only those conditions to which they can adhere.

Commonly proffered conditions include providing buffers above and beyond the applicable zoning district regulations and/or restrictions on the regulations of the zoning district in respect to such areas as outdoor storage, signs, access, lighting, or use of the property. As a guide to petitioners seeking a conditional rezoning, the following language for commonly proffer conditions is suggested. Any or all of the following categories and the language itself may not be appropriate for all rezonings.

Use Limitations:

- Density Limitations
- Landscaping
- Physical Improvements
- Access
- Lighting
- Trails
- Public Facilities
- Sidewalk Connectivity
- Traffic Control/Improvements

Code Exemptions

USBC 102.3 Code Exemptions

- Federally owned buildings and structures
- Equipment installed by a public utility (including towers and poles)
    - Electrical equipment and wiring used for radio, broadcast or cable television, telecommunications or information service transmission
    - Exempt equipment and wiring must be located on public or private property for which the provider has rights of occupancy and entry

- Automotive lifts
- Manufacturing and processing machines
- Structures housing or supporting exempt equipment <u>are not exempt</u> from code

- Parking lots and sidewalks that are not part of an accessible route
    - Accessible routes are determined by VCC 1104

- Non-mechanized playground and recreational equipment where no fee is charged
- Intermodal freight containers; moving containers; and storage containers
    - Must be used for intended purpose (storage – either temporary or permanent)
    - Must NOT be "converted" to an occupiable structure in order to be considered exempt. If modified to create an occupiable structure, then the modified structure must be code compliant
    - IBSR Does not cover these structures

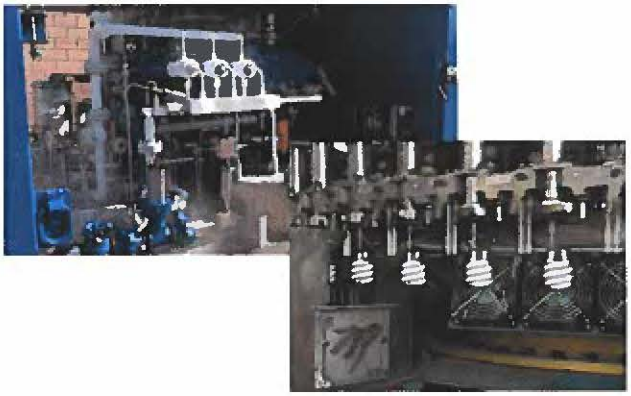
USBC 102.3 Code Exemptions (continued)

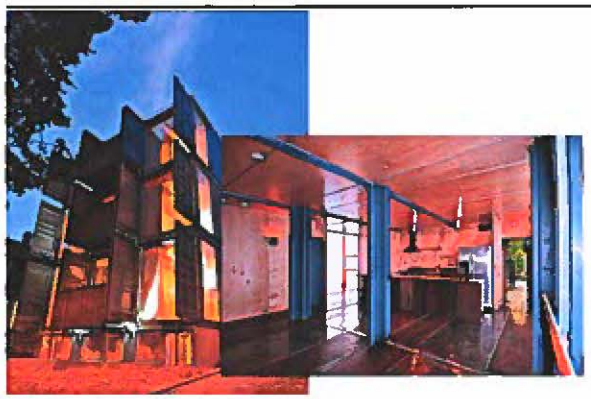
- Industrialized buildings
  - Regulated by the Industrialized Building Safety Regulations (IBSR)
  - By definition, such buildings are modular, subject to state regulations, and manufactured (and inspected) off site

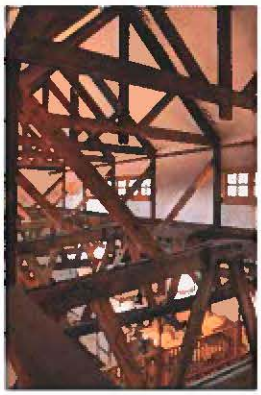
- Manufactured homes
  - Such structures are:
    - subject to federal regulations;
    - transportable;
    - larger than 8' x 40' (or 320 sqft) sections on permanent chassis
    - designed to be used as a single family dwelling

- Farm buildings and structures
  - Farm buildings must be located on the property where farming takes place and used for:
    - Storage, handling, production, display, sampling or sale of farm products
    - Livestock
    - Farm office
    - Use, maintenance or storage of farm machinery or vehicles or farming supplies
    - Implementation of Best Management Practices
  - A structure is NOT a farm building if it is used for a restaurant or residence

Let's review







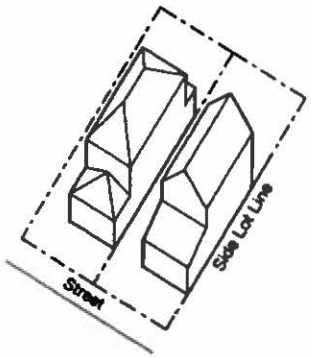
Permits

USBC 103.3-103.4 Existing Structures

- Any structure that undergoes a Change of Occupancy shall comply with the USBC
  - Different division within a group
  - Different group
  - Purpose or level of activity
- Additions – may comply with the provisions of the VEBC or the VCC (via the VEBC)

USBC 108.1 Permits Required

- A permit must be issued prior to moving a lot line that increases the hazard or decreases the safety of existing structures



- A permit must be issued prior to removal or disturbing any asbestos. This includes residential!

- For emergency work, the work may commence without permits provided the application is submitted the following business day.
- The Building Official may authorize work to commence under other circumstances pending receipt of an application or permit issuance.

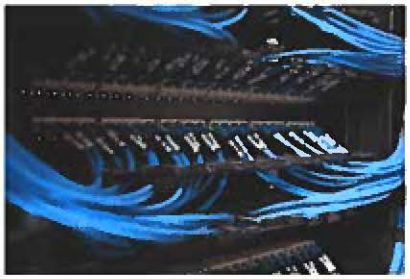
Application of the code: USBC 103.7 – 103.8 Special Retrofit Provisions

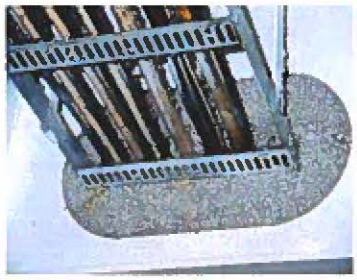
- Retrofit requirements mandatory under VEBC 1701
  - 1701.1-1701.14 Provisions for fire safety systems
  - 1701.15 Posting of the occupant load
  - 17.16 Above ground Liquid Fertilizer Storage Tanks (ALFSTs)
  - 1701.17 Standards for replacement glass

Exempt from Permits

108.2 Permits – Exemptions

- A permit is not required for low voltage systems provided:
  - The system operates at under 50 volts
  - It is not located in a plenum
  - It does not penetrate a smoke/fire rated assembly
  - It is not part of a fire safety system

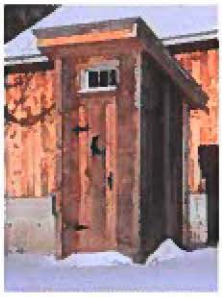




- A permit is not required for one story detached accessory structures, provided:
  - The floor area does not exceed 256 sqft

    AND
  - The structure is not accessory Group F-1 or H





- A permit is not required for detached prefabricated utility housing structures provided the floor area does not exceed 150 sqft

- A permit is not required for tents or air supported structures provided:
  - The covered area does not exceed 900 sqft (including all connecting areas with common means of egress)

    AND
  - The occupant load is 50 or fewer people

- A permit is not required for fences provided:
  - It is not a swimming pool barrier
  - It is not required for pedestrian safety during construction per IBC 3306

- A permit is not required for concrete or masonry walls provided:
  - It does not exceed 6 feet in height
  - Ornamental column caps are not to be included in determining height

- A permit is not required for retaining walls provided:
  - It does not act to contain hazardous liquids
  - It retains less than 3 feet of unbalanced fill
  - It does not support a surcharge other than ordinary unbalanced fill

- A permit is not required for swimming pools provided:
  - The surface area is 150 sqft or less, AND
  - The capacity is 5,000 gallons or less, AND
  - The depth is less than 24 inches

- A permit is not required for signs exempted under IBC Appendix H:
  - Painted non-illuminated
  - Temporary for sale/rent
  - Erected by transportation authorities
  - Projecting signs 2.5 sqft or less
  - Changing the display parts of signs designed for such changes

- A permit is not required for replacement of LP gas containers provided:
  - They are above ground
  - Replacement capacity is the same
  - Replacement location is the same
  - Installed by serving supplier

- A permit is not required for flagpoles 30 feet or less in height

- A permit is not required for temporary ramps
  - Group R-3 or R-5
  - Not to exceed 30 inches in height

- A permit is not required for crypts, mausoleums, or columbaria
  - Not exceeding 1500 square feet in area
  - Not for occupancy
  - Used solely for interment of human or animal remains
  - Not subject to special inspections

- A permit is not required for ordinary repairs:
  - Replacement of windows and doors in dwelling units
  - Replacement of plumbing fixtures and well pumps
  - Replacement of electrical fixtures
  - Replacement of mechanical equipment (except for fuel fired)

- If it goes BOOM, it requires a permit

- 103.5.1 Fuel Burning Appliances in R-5
  - Replacement or new installation of any fuel-burning appliance or equipment in Group R-5:
    - Inspections shall be performed to ensure that the connected vent or chimney systems
      - are sized in accordance with the IRC,
      - are clean, free of obstructions or blockages, defects or deterioration and are in operable condition.
    - Compliance with this provision may be by inspection or certification.

- A permit is not required for ordinary repairs...
  - Residential re-roofing/re-siding (Groups R-3, R-4 & R-5)
    - Wind speed not greater than 100 mph
  - Residential roof decking 100 sqft or less
    - Not FRT
  - Floor finishes
  - Replacement interior wall/ceiling finishes
    - Class C only for groups A, E and I

- A permit is not required for ordinary repairs:
  - Cabinets and trim
  - Paint and wallpaper
  - Other repair work that Building Official deems minor and poses no threat to public health and safety

- A permit is not required for construction work deemed by the Building Official to be
  - Minor and ordinary
    AND
  - Does not adversely affect public health or general safety

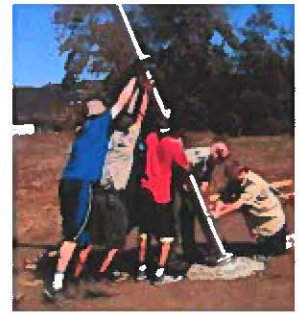
Let's Review

Which requires a permit?

-or-

32' high

-or-



30 ' high

Which requires a permit?

-or-

80' height

-or-

80' height

Tree house / play set

-or-

20' x 14' gazebo with hot tub

Which requires a permit?

Party tent 10' x 60'

-or-

3 separate tents, each seating 40 and 850 sqft

-or-

Replacement HVAC equipment in residential attics

Replacement of roofing in Virginia Beach

-or-

Replacement of roofing in Leesburg

Which requires a permit?

16' x 18' shed

-or-

18' x 40' shed

Permit Application and Issuance

USBC 108.1 Permits Required

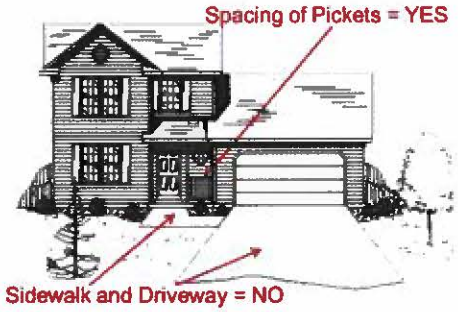
- A permit must be issued prior to removal or disturbance of any asbestos

110.3 Permits

- Commercial Buildings originally constructed prior to JANUARY 1, 1985 require asbestos inspection prior to alteration or demolition permit issuance
- Certification that no asbestos was found – OR
- Asbestos was found and appropriate remediation will be undertaken
- Section 110.3 does not apply to residential (single family or multi-family of 4 or fewer units) unless renovation is for commercial or public development

109.4 Permits – Construction Documents

- Plan review is for determining code compliance only



103.2 When Applicable to New Construction

- Previous permits:
    - A permit issued under a previous version of the USBC remains valid throughout construction, unless revoked or suspended, and the building official is not permitted to require that any changes be made to reflect a more recent edition of the code.

Inspections

USBC 104.2 Enforcement Provisions

- A local building department may assign inspection responsibilities to another agency of the locality.
    - When so assigned, the agency shall coordinate its reports of inspections with the local building department.

113.1.2 Duty to Notify (Inspections)

- When construction reaches a stage of completion which requires an inspection, the permit holder shall notify the building official.

113.1.3 Duty to Inspect

- Except when inspected by an approved inspection agency, the building official shall perform the requested inspection in accordance with this code upon notification by the permit holder that work has reached a stage requiring an inspection.

112.2 Special Provisions – Alternate Methods or Materials

Performance:

- Alternative methods or materials shall be approved when the building official determines that they comply with the intent of the code and meet the requirements for quality, strength, effectiveness, fire resistance, durability and safety



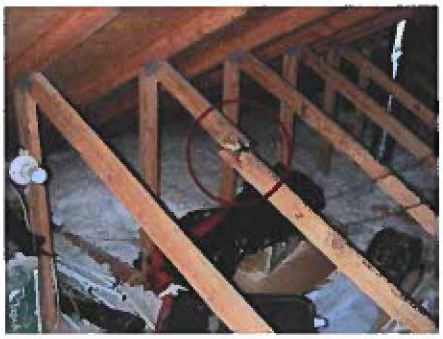
112.2 Alternative Methods or Materials

Basis and approval of alternate materials:

- Sufficient technical data must be required to support the use of materials and equipment.
- nationally recognized testing laboratories
- evaluation services
- registered design professionals

113.5 In-Plant and Factory Inspections

- Prefabricated materials, equipment and assemblies must be inspected where they are made or assembled.
- The building official must require evaluation reports of these components to determine compliance.



113.1 General (Inspections)

Coordination with other agencies:

- The building official must cooperate with and coordinate inspection reports with fire, health and other state and local authorities having related responsibilities, prior to issuing a certificate of occupancy.

113.6 Approval or Notice of Defective Work

Inspections shall result in a written approval or written notice of defective work.

- If the permit holder requests, the notice of defect must reference the appropriate code section.
- May be communicated electronically
- Defects must be corrected and re-inspected prior to concealment.
- The building official must maintain a record of all inspections.

113.7 Approved Inspection Agencies

- The building official may accept reports from approved individuals or approved agencies that satisfy qualifications and reliability requirements.
- If the building official is unable to perform the inspection within 2 working days of a request or an agreed upon date, the building official must accept inspection reports from an approved individual or agency.
- Photographs, videotapes or other sources of pertinent data may be considered as constituting such reports and tests.

113.7.1 Third-Party Inspectors

Every building department must have a written policy establishing the minimum acceptable qualifications for third-party inspectors that shall include:

- The format
- Time frame required for submission of reports
- Any pre-qualification or pre-approval requirements
- Any other requirements and procedures established by the building official.

113.8 Final Inspection

- A final inspection must be performed after completion and prior to issuance of the certificate of occupancy to ensure that all defects have been corrected.
- The building official shall be permitted to require the electrical service to a building or structure to be energized prior to conducting the final inspection.

Issuance of Modifications

The Uniform Statewide Building Code provides for approval of new, innovative products and design methodologies that may not meet the letter of current code, or the code may not address the product or method adequately.

- **112.2 Alternate Means and Methods** to "facilitate prompt acceptance of new building materials and methods"
- **106.3 Issuance of Modifications** allows the building official to issue building code modifications that meet the "spirit and functional intent of the code" and accept provisions of more current editions of model codes and standards.

Certificates of Occupancy

116.1 General; When to be Issued & 113.8 Final Inspection

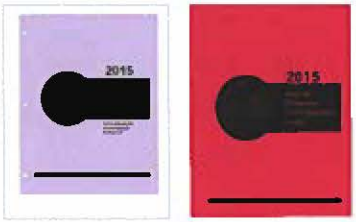
A certificate of occupancy must be obtained prior to occupancy of a structure.

- The approved final inspection may serve as the certificate of occupancy for an addition or alteration to a structure for which a certificated has already been issued.

116.1.1 Temporary Certificate

A temporary certificate of occupancy may be issued prior to completion of the entire work covered by a permit, provided that portion can be occupied safely.

116.4 Issuance of Certificates for Pre-USBC Buildings or Structures



A certificate of occupancy for an existing structure constructed prior to initial edition of the USBC shall be issued upon the written request of the owner.

- No change in the occupancy classification.
- No violations of the Maintenance or Fire Prevention Codes.
- Exception: When no certificate exists, but the local building department has records indicating that a certificate did exist, then the building official may either verify in writing that a certificate did exist, or issue a certificate based upon the records.

116.3 Suspension or Revocation of a Certificate

The building official may, in writing, suspend or revoke a certificate of occupancy whenever...

- It was issued in error.
- It was issued on the basis of incorrect information.
- When the structure is in repeated violation of the USBC.
- When the Maintenance Code Official requests under USBC III – 105.7.

Notices and Orders

115.2 Notice of Violation

A written notice of violation must be issued to the responsible party if any violation of the code or any directives or orders of the building official have not been corrected or complied with in a reasonable time.

- The responsible party must be provided an opportunity to comply before the notice is issued.

112.1 General

It is the duty of any person performing work covered by this code to comply with all applicable provisions of this code and to perform and complete such work so as to secure the results intended by the USBC

115.2 Notice of Violation

The Notice of Violation shall reference the code section upon which the notice is based and direct the discontinuance and abatement of the violation or compliance with the directive or order.

The notice shall be issued by delivering a copy to the responsible party

- by mail to the last known address
- delivering it in person
- leaving it in the possession of any person in charge of the premises
- posting it in a conspicuous place if the person in charge of the premises cannot be located.

The notice must indicate the right of appeal by referencing the appeals section. (119)

- When the owner, permit holder or tenant are not the responsible party, a copy of the notice must be delivered to such owner, permit holder or tenant.

115.2.1 Notice not to be issued under Certain Circumstances

When a violation is discovered:

- More than two years after the issuance of the certificate of occupancy or the date of initial occupancy, whichever occurred later…
- Or more than two years after the final inspection for an alteration or renovation

The notice shall only be issued upon advice of the locality's legal counsel that action may be taken to compel correction.

- See Title 19.2: Statute of Limitations

Code of Virginia § 19.2-8 Limitation of Prosecutions

Prosecution of Building Code violations under § 36-106 shall commence within one year of discovery of the offense by the building official, provided that such discovery occurs within two years of the date of initial occupancy or use after construction of the building or structure, or the issuance of a certificate of use and occupancy for the building or structure, whichever is later.

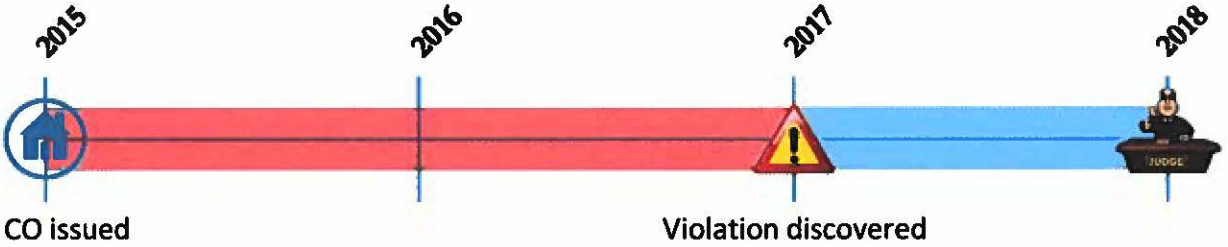
- However, prosecutions under § 36-106 relating to the maintenance of existing buildings or structures as contained in the USBC shall commence within one year of the discovery of the offense by the building official.

Statutory Limitations

Discovery Period: 2 years to discover

Prosecution Period: 1 year to prosecute from time of discovery

Example: violation found at the end of discovery period



115.2.1 Notice Not to be Issued Under Certain Circumstances

When compliance cannot be compelled by prosecution, the building official, *when requested by the owner*, shall document the existence of the violation and the edition of the USBC the violation is under.

115.3 Further Action When Violation Not Corrected

If the responsible party has not complied with the notice, the building official must request the locality's legal counsel, in writing, to institute appropriate legal proceedings to gain compliance.

- Where authorized by the locality, the building official may issue or obtain a summons or warrant.

115.4 Penalties and Abatement

Being found guilty of violating the code does not relieve the responsible party from the responsibility to abate the violation.

114.1 Issuance of (Stop Work) Order

The building official may issue a Stop Work Order when it is determined that work is being done in violation of the USBC.

- It must be in writing.
- It shall be given to the owner or owner's agent, or the person doing the work.
- It shall state the conditions under which work may be resumed.

114.2 Limitation of (Stop Work) Order

The Stop Work Order shall only apply to the specific work that is being performed in violation of the USBC.

The Virginia Way

Code Enforcement Professional as "Educator"

You have an important role as an educator:

- Homeowner
- Contractor
- Developer
- Other

The Virginia Way

Saying "No" is the easy route

- When you say 'no', all opportunities for mutual respect, understanding and learning diminish substantially.
- When you say 'no', your job becomes easy because the process, along with progress, is stopped.

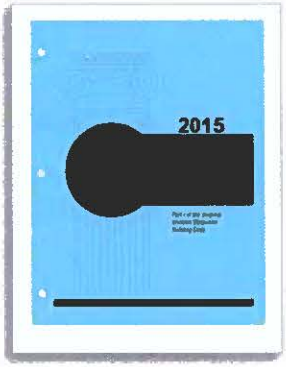
Saying "Yes" is not the easy route.

- When you say 'yes', all opportunities for mutual respect, understanding and learning increase substantially.
- When you say 'yes', your job becomes tougher because saying 'yes' means that you've taken the time to learn enough to be confident in your advice and decisions.

Learn how to say 'yes'

Notes

2015 USBC Administrative Codes



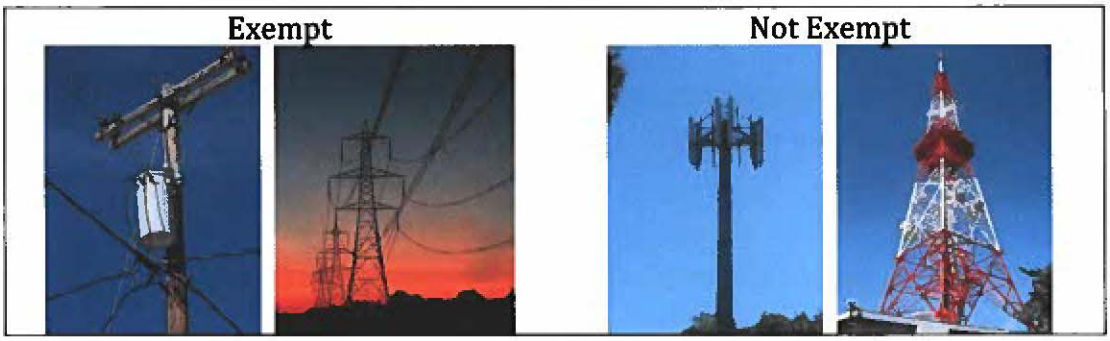
❑ 102.3 Exemption 1	❑ 105.2.1
❑ 102.3 Exemption 2	❑ 108.2
❑ 102.3 Exemption 3	❑ 108.2 #16
❑ 102.3 Exemption 4	❑ 108.2 exception to exceptions #2
❑ 103.1.1	❑ 113.7
❑ 103.3-103.7 & VEBC 102.2	❑ 117.2

USBC 102.3 Exemption 1

- Wires and transmission equipment for power, communication and cable TV are exempt

USBC 102.3 Exemption 2

- Wire and equipment-supporting structures such as poles, towers, gantries and cable trays for electric power service providers are exempt



USBC 102.3 Exemption 3

- "Direct burial poles", AKA telephone poles, are exempt

USBC 102.3 Exemption 4

- Formerly exemption 2
- Material and product handling conveyor systems are now exempt from USBC
- Not exempt from effects of installation on egress, fire protection, structural, therefore permit may still be required

USBC 103.1.1 Virginia Existing Building Code

- USBC Part II now called Virginia Existing Building Code (VEBC), not 'VRC'
- For all work in existing buildings and structures, start in the VEBC

USBC 103.3-103.7 and VEBC 102.2

- Scoping and administrative requirements for existing buildings moved to VEBC 102.2
- VCC 103.3-103.7 is eliminated

VCC 105.2.1 Qualifications of Technical Assistants; 105.2.2 Certification of Technical Assistants, and Chapter 2 Definitions

- Permit technicians are now technical assistants
  - Required to become certified
  - Those permit technicians currently employed as technical assistants are grandfathered in same position and locality

USBC 108.2 Exemptions from Application for Permit

- Home monitoring and automation systems are exempt from permit

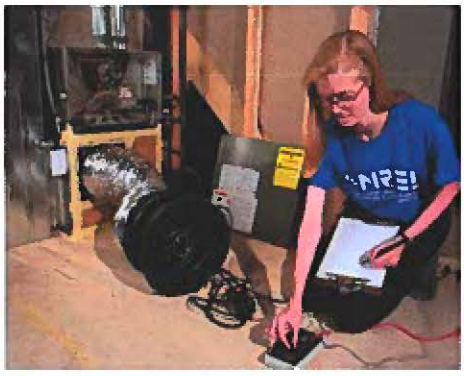
USBC 108.2 #16

- Billboard safety upgrades to add or replace steel catwalks, steel ladders or steel safety cable are exempted from permit

USBC 108.2 Exception to the Exceptions #2

- Application for a permit may be required by the building official for any items exempted in section 108.2, which are located in a special flood hazard area.

USBC 113.7 Approved Inspection Agencies



- Duct test required by VECC R403.3.3/VRC N1103.3.3 may be performed by the installing contractor
- Such contractor is exempt from the AHJ's 3rd party policy
- The building official must accept contractor's test report

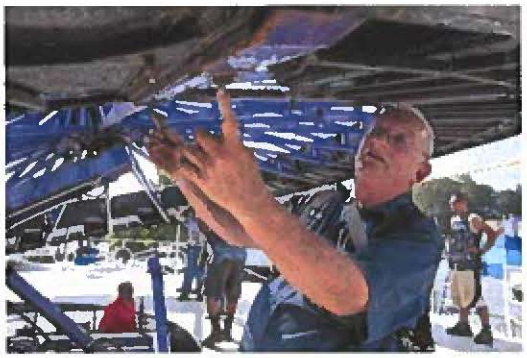
USBC 117.2 Moved Buildings and Structures

- Moved buildings are addressed in the moved building chapter of the VEBC
- Manufactured homes and industrialized buildings are not affected and are still regulated by the Virginia Manufactured Home Safety Regulations and the Virginia Industrialized Building Safety Regulations, respectively

2015 Virginia Amusement Device Regulations

13VAC5-31-75

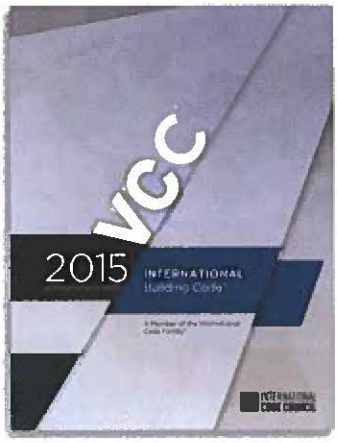
- The 75% fee reduction is now only applicable when the owner or operator of the amusement device hires the private inspector



Notes

2015 Virginia Construction Code

- ❑ 202 Change of Occupancy
- ❑ 202 Clinics, Outpatient
- ❑ 202 Coastal A Zone
- ❑ 202 Coastal High Hazard Area
- ❑ 202 Existing Structure
- ❑ 202 Private Garages
- ❑ 202 Substantial Improvement
- ❑ 303.1.1
- ❑ 304.1
- ❑ 304.1.1
- ❑ 307.1 Exception 15
- ❑ 308.4
- ❑ 310.5.2
- ❑ 406.3.1
- ❑ 407.2.6
- ❑ 430
- ❑ Tables 504.3 & 504.4
- ❑ 717.5.3
- ❑ 717.6.2.2
- ❑ 903.2.1.6
- ❑ 903.3.5.1.1
- ❑ 905.3.1
- ❑ 912.3
- ❑ Table 1004.1.2
- ❑ Table 1006.2.1
- ❑ 1007.1.1.1
- ❑ 1010.1.9.3
- ❑ 1010.1.9.8
- ❑ 1010.1.9.9
- ❑ 1016.2
- ❑ 1018.3
- ❑ 1023.3.1
- ❑ 1023.5
- ❑ 1104.4
- ❑ 1107.3
- ❑ 1107.5.1.1
- ❑ 1107.6.1.1
- ❑ 1109.2.3
- ❑ 1110.1
- ❑ 1405.3
- ❑ 1601.3
- ❑ 1603.1.7
- ❑ 1603.1.8.1
- ❑ 1704.2
- ❑ 1704.5
- ❑ 1705.2.3
- ❑ 1705.3
- ❑ 1711.1
- ❑ 1804.1
- ❑ 1904.1



- ❑ 2101.2
- ❑ 2103
- ❑ 2111
- ❑ 2210.1.1.3
- ❑ 2111.1
- ❑ 2303.1.4
- ❑ Tables 2308.4.1.1(1) & (2)
- ❑ Tables 2308.7.1(1) & (2)
- ❑ Tables 2308.8(1) & (2)
- ❑ 2603.5.5
- ❑ 2612
- ❑ 3004

202 Change of Occupancy

- Term relocated to VEBC as a change of occupancy does not occur in new construction

202 Clinics, Outpatient

- The definition provides a new classification that indicates that there are facilities not regulated by the Virginia Department of Health, and such facilities do not require the same level of oversight as those that do.

202 Coastal A Zone

- New definition describes the wave conditions and specifies that the inland limit is either the LiMWA (Limit of Moderate Wave Action) if delineated on a FIRM (Flood Insurance Rate Map), or as designated by the authority having jurisdiction.

202 Coastal High Hazard Area

- New term for areas previously defined as *"flood hazard areas subject to high velocity wave action"*

202 Existing Structure

- New definition includes flood related provisions: "A structure (i) for which a legal building permit has been issued under any edition of the USBC; (ii) which has been previously approved; or, (iii) which was built prior to the initial edition of the USBC. For application of provisions in flood hazard areas, an existing structure is any building or structure for which the start of construction commenced before the effective date of the community's first flood plain management code, ordinance or standard"
- The term "existing construction" has been removed from the VCC.

202 Private Garages

- New definition
- Intended to be a building or portion of a building where the tenants of that building store or keep their own motor vehicles on the same premise.

202 Substantial Improvement

- New definition specific to determining flood hazard area construction requirements

303.1.1 Small Buildings and Tenant Spaces

- Where conditions of this section are met, the occupancy "shall be permitted" to be classified as B use. Previously the classification was required.

304.1 Small Kitchens

- Such occupancies may be designated a B use provided they do not exceed 2,500 square feet

304.1 Training and Skill Development

- Section now indicates types of activities that fall within this use group
- Allows for tutoring centers, martial arts and gymnastic studios, etc. to be included no matter the age of the pupil

304.1.1 Licensed Day Support and Treatment Facilities

- 3 new conditions must be met in order to be permitted to be designated Group B:
  - Anyone that may require physical assistance must be located on the level of exit discharge;
  - Any change in elevation on that level of exit discharge must be by means of a ramp or sloped walkway
  - Where facilities are located more than two stories above grade, they shall be provided with an NFPA 13 system throughout the entire building

- Such facilities must be licensed by the Virginia Department of Behavioral Health and Developmental Services

307.1 Exception 15 High Hazard Group H

- Storage of "distilled spirits and wines" can now be classified S use
- Must meet requirements of 414.2, but is less stringent than F or H uses

308.4 I-2 Conditions 1 and 2

- Section now differentiates between "short" and "long" term care, with different requirements:
  - Condition 1 is generally for long term care such as a nursing home
  - Condition 2 is for short term care, such as a hospital

310.5.2 Lodging Houses

- Section expanded to address "bed and breakfast" types of occupancies

406.3.1 Classification & 406.3.2 Clear Height

- New provisions for private garages provide requirements for separation if >1,000 sqft
- 406.3.2 adds requirements for ceiling height and accessibility

407.2.6 Cooking Facilities & 904.13 Domestic Cooking Systems in Group I-2 Condition 1

- Domestic cooking appliances may be used in an open corridor in an I-2 Condition 1 setting as long as it meets all 13 of the conditions listed.
  - Items include occupant load restrictions, specific signage requirements, limits on the number of appliances, hood requirements, and more

430 Higher Education Laboratories

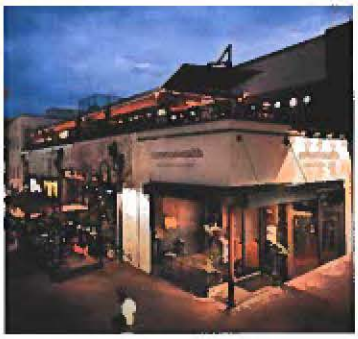
- New section increases allowable storage limits for hazardous materials for higher education laboratories provided they meet the criteria described in this section, without requiring H use classification.

Tables 504.3 & 504.4 Building Height and Number of Stories

- Former Table 503 now divided into three tables for ease of use

717.5.3 Shaft Enclosures

- Section consolidated and has one list of exceptions
- UL 263 no longer acceptable testing standard
- Differences among use groups removed
- Adds smoke dampers to exception 1



717.6.2.2 Equipment Shutdown

- Mechanical equipment shall be shut down when ceiling radiation dampers are activated

903.2.1.6 Assembly Occupancies on Roofs

- Requires sprinklers for assembly occupancies located on the roof, and all floors between the roof and level of exit discharge.
- A-2 requires these floors to be sprinklered when occupant load exceeds 100; and for all other assembly groups that exceed 300

903.3.5.1.1 Limited Area Sprinklers Serving Less Than 20 Heads

- Provides allowances for sprinkler systems supplied by domestic service, where a wet automatic standpipe is not available and a limited area system of 20 heads or less is required

905.3.1 Stand Pipe Pressure

- Requirements from previous 905.2 now located here
- Removed hose connection size and pressure requirements

912.4 Fire Department Connection Access

- Maintenance requirements relocated to Virginia Property Maintenance Code
- Refer to the Statewide Fire Prevention Code

Table 1004.1.2 Maximum Floor Area Allowances per Occupant

- Mercantile use is now one factor regardless of floor level: 60 gross
- Storage, stock and shipping areas remain 300 gross

TABLE 1004.1.2 Maximum Floor Area Allowances per Occupant

Function of Space	Occupant Load Factor[a]
Mercantile	60 gross
~~Areas on other floors~~	~~60 gross~~
~~Basement and grade floor areas~~	~~30 gross~~
Storage, stock, shipping areas	300 gross

For SI: 1 square foot = 0.0929 m^2.
a. Floor area in square feet per occupant.
(Remaining portions of table not shown are unchanged.)

Table 1006.2.1 Spaces with One Exit or Exit Access Doorway

- Consolidates requirements for occupant load from Table 1015.1 and common path of egress from Table 1403

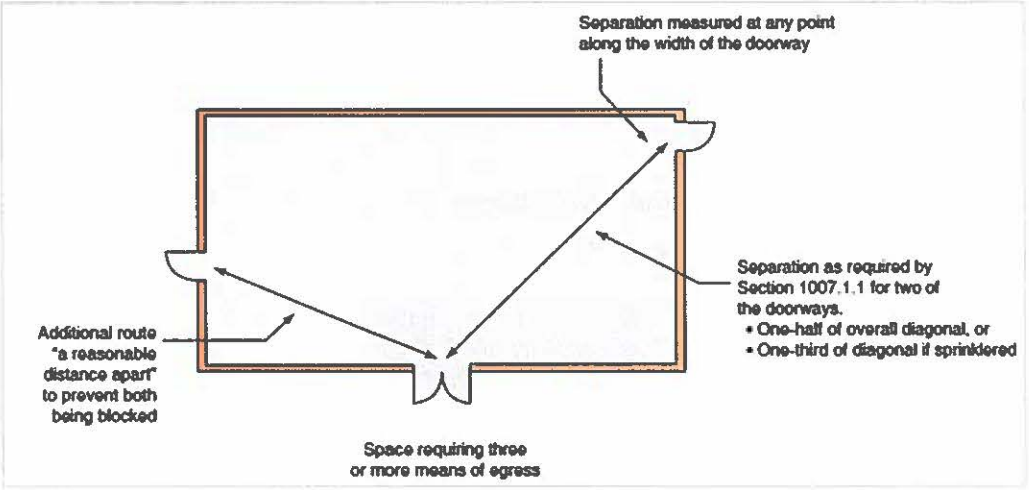
TABLE 1006.2.1 Spaces with One Exit or Exit Access Doorway

Occupancy	Maximum Occupant Load of Space	Maximum Common Path of Egress Travel Distance (feet)		
		Without Sprinkler System (feet)		With Sprinkler System (feet)
		Occupant Load		
		OL ≤ 30	OL > 30	
A[c], E, M	49	75	75	75[a]
B	49	100	75	100[a]
F	49	75	75	100[a]
H-1, H-2, H-3	3	NP	NP	25[b]
H-4, H-5	10	NP	NP	75[b]
I-1, I-2[d], I-4	10	NP	NP	75[a]
I-3	10	NP~~100~~	NP~~100~~	100[a]
R-1	10	NP~~75~~	NP~~75~~	75[a]
R-2	10	NP~~75~~	NP~~75~~	125[a]
R-3[e]	10	NP~~75~~	NP~~75~~	125[a]
R-4[a]	10	75	75	125[a]
S[f]	29	100	75	100[a]
U	49	100	75	75[a]

For SI: 1 foot = 304.8 mm.
NP = Not Permitted
a. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.
b. Group H occupancies equipped throughout with an *automatic sprinkler system* in accordance with Section 903.2.5.
c. For a room or space used for assembly purposes having fixed seating, see Section ~~1028.6~~ 1029.8.
d. For the travel distance limitations in Group I-2, see Section 407.4.
e. The length of common path of egress travel distance in a Group R-3 occupancy located in a mixed occupancy building or within a Group R-3 or R-4 congregate living facility.
f. The length of common path of egress travel distance in a Group S-2 open parking garage shall be not more than 100 feet.

1007.1.1.1 Measurement Point

- Clarifies to which points the doorway, stair or ramp should be measured

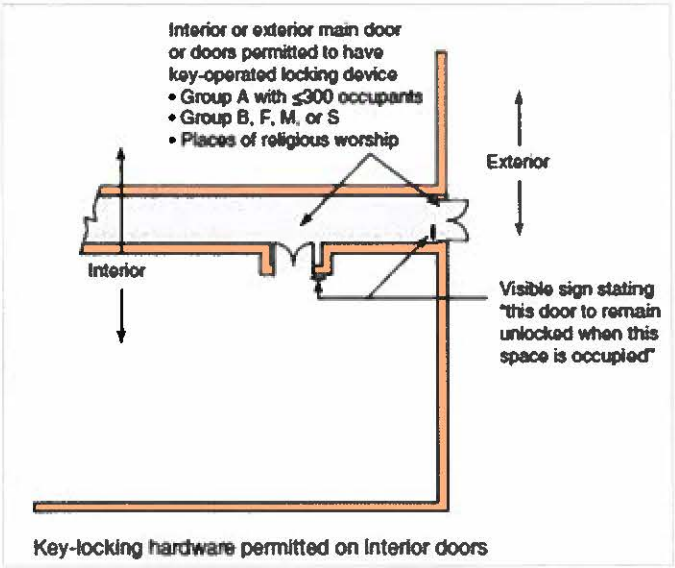


1008.3.3 Rooms and Spaces

- In the event of power supply failure, an emergency electrical system shall automatically illuminate all of the following areas:
    1. Electrical equipment rooms
    2. Fire command centers
    3. Fire pump rooms
    4. Generator rooms
    5. Public restrooms with an area greater than 300 square feet
- From IBC commentary: "The intent of items 1-4 is to have emergency lighting in areas significant for emergency responders or maintenance personnel who may be trying to locate and fix the loss of power issue for the building.

1010.1.9.3 Locks and Latches

- In groups B, F, M and S and places religious worship, main door(s) is(are) permitted to be equipped with key operated locking devices from the egress side

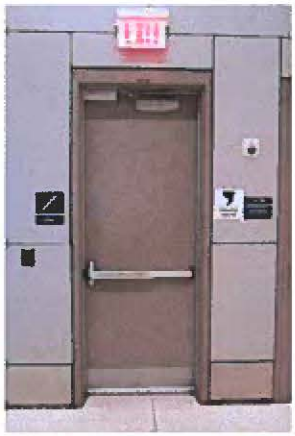


1010.1.9.8 Sensor Release of Electrically Locked Egress Doors

- Groups I-2 and I-4 now included
- Title changed from "Access Controlled Egress Doors" to keep in alignment with the hardware industry terminology

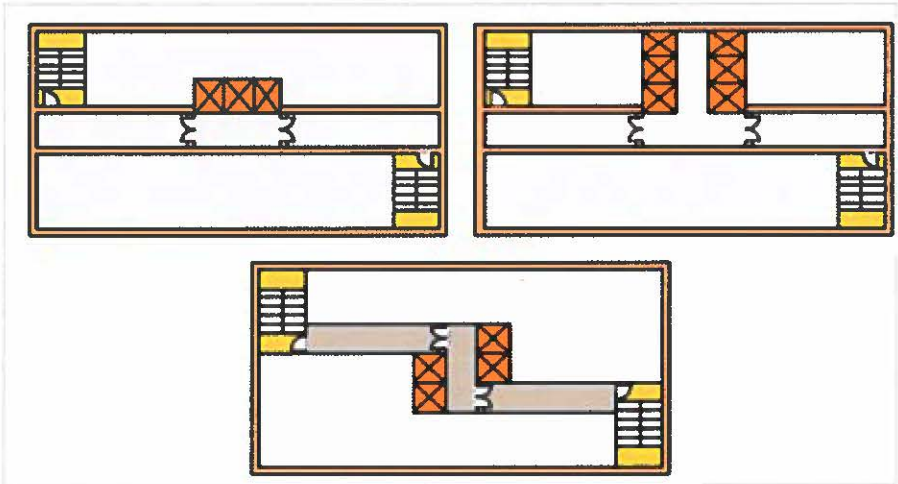
1010.1.9.9 Electromagnetically Locked Egress Doors

- Now includes groups I-1, I-2 and I-4



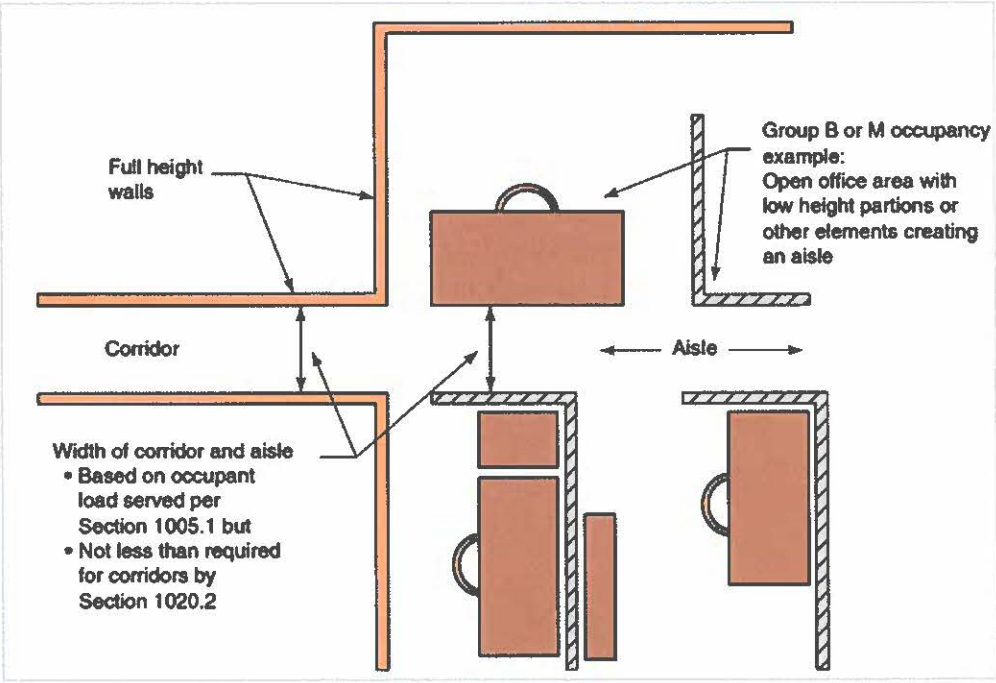
1016.2 Egress through Intervening Spaces

- VA deletes elevator lobby requirement in 3006
- Section still permits egress through elective elevator lobbies and the limitations of new IBC 1016.2 #1 do not apply to elective elevator lobbies



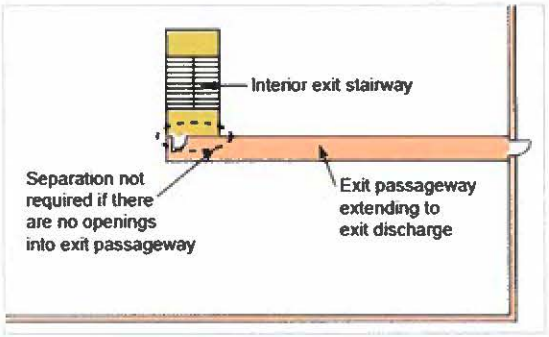
1018.3 Aisles in Groups B and M

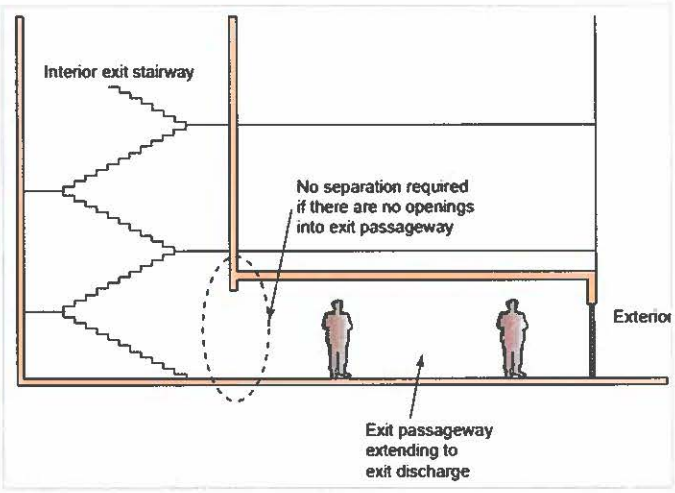
- Minimum clear aisle width shall be determined by 1005 for occupant load served
- Shall not be less than that required for corridors



1023.3.1 Stairway Extension

- Fire separation between interior exit stairway or ramp, and the exit passageway can be omitted if no other openings in exit passageway



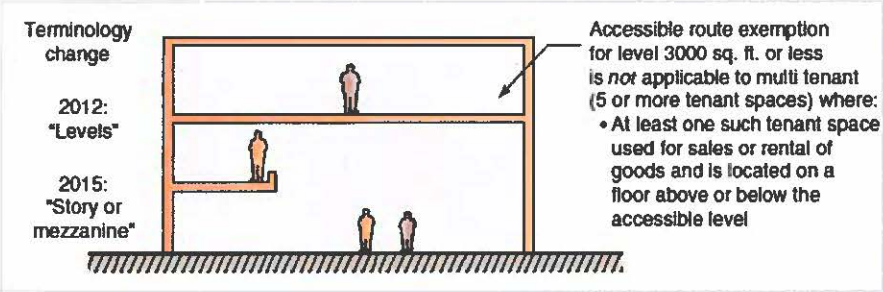


1023.5 and 1024.6 Penetrations

- New exceptions to allowable penetrations of stairway/exit passage
- Allows structural steel (other than columns) supporting roof construction to penetrate such enclosures where:
  - Fully sprinklered;
  - 1- or 2- story building; and
  - Other than Group H

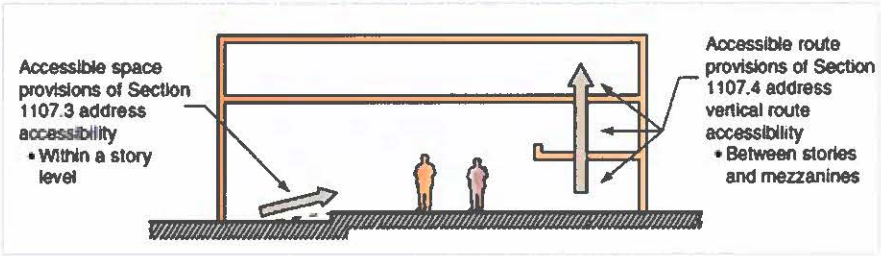
1104.4 Multistory Buildings and Facilities

- Now includes distinctions between stories and mezzanines
- Further clarifies exception for M use and no exception for government buildings



1107.3; 1107.4 Accessible Spaces and Routes

- 1107.3 addresses connecting all accessible spaces within a building
- 1107.4 addresses changes in elevations between stories, or to mezzanine where route is typically by means of elevator

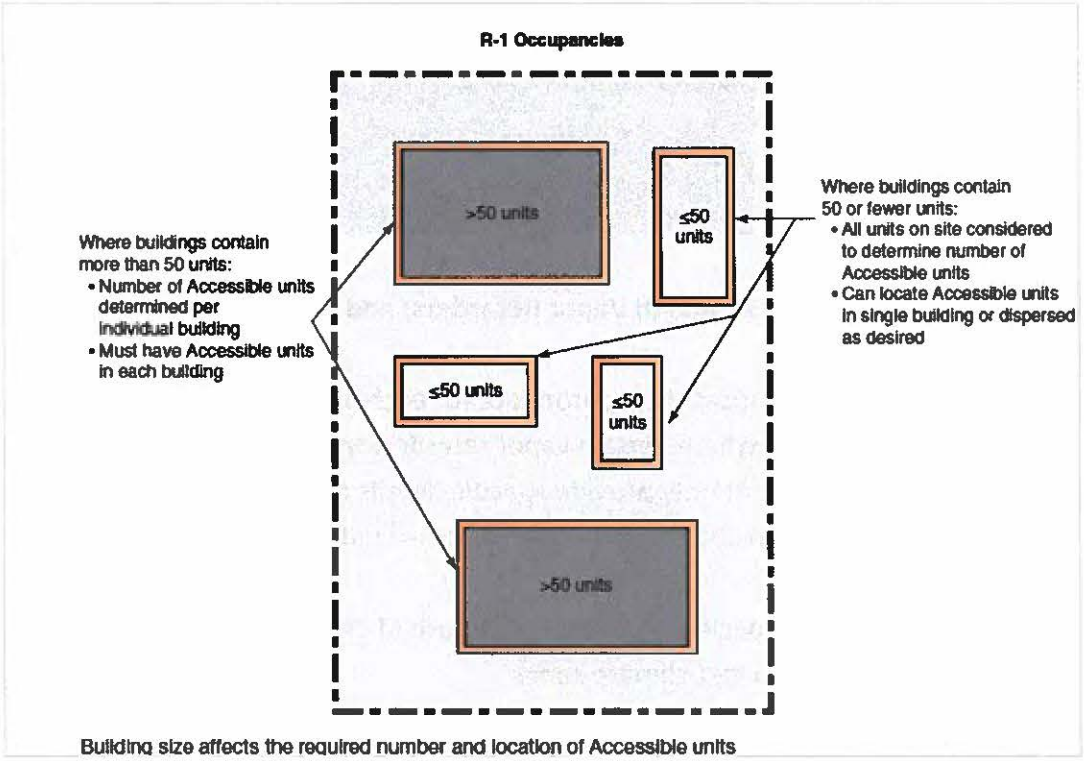


1107.5.1.1; 1107.6.4.1 Accessible Units in Assisted Living Facilities

- Increase in accessible units for Group I-1 and R-4 assisted living facilities
- R-4 now has identical conditions 1 and 2

1107.6.1.1 Accessible Units (Group R-1)

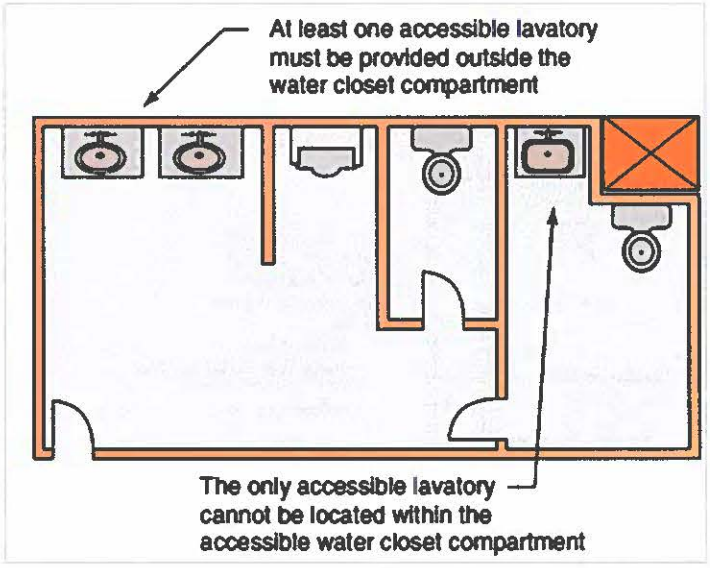
- The number of accessible units required is determined by the building if it contains more than 50 dwelling/sleeping units
- Where such a building contains 50 dwelling/sleeping units or less, all dwelling/sleeping units on site shall be used to determine number of accessible units required



Building size affects the required number and location of Accessible units

1109.2.3 Lavatories

- Where the only accessible lavatory is located in an accessible compartment, an additional accessible lavatory shall be provided outside that compartment

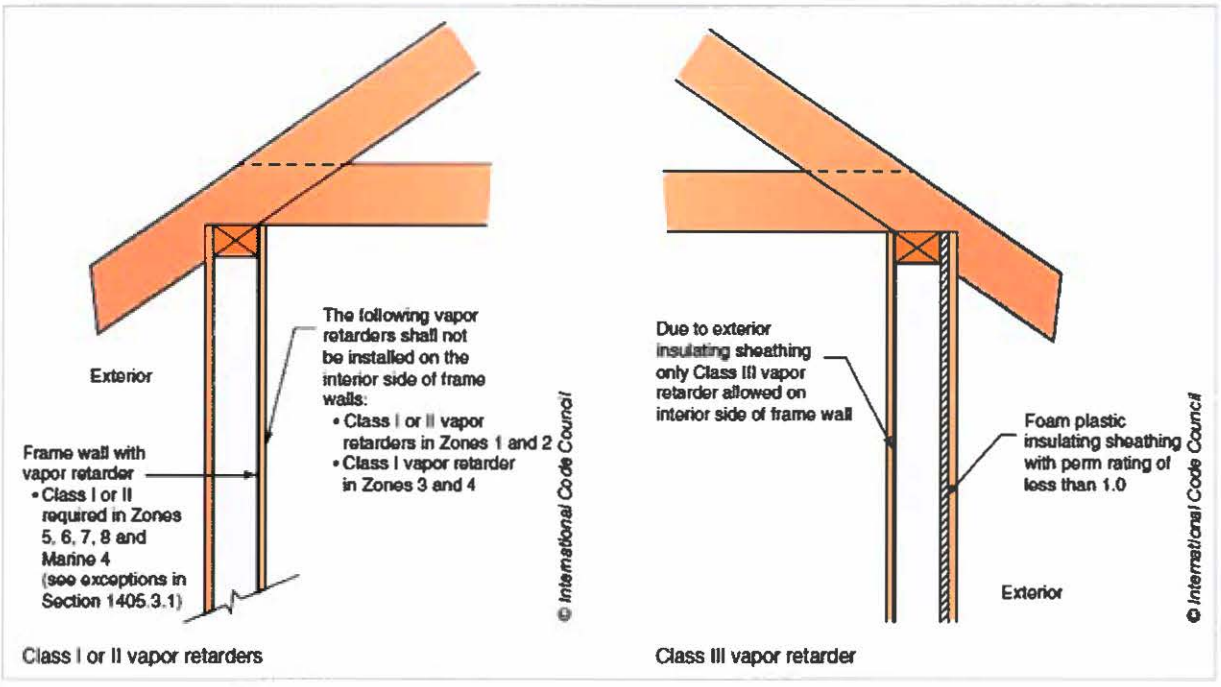


1110.1 General (Recreational Facilities)

- Detailed scoping requirements added for recreational facilities

1405.3 Vapor barriers; 1405.3.2 Class III Vapor Retarders; and 1405.3.3 Material Vapor Retarder Class

- The required types and locations appropriate for each class of vapor retarder have been revised to also indicate where certain vapor retarders are not allowed to be installed.
- The revised provisions not only provide specific details regarding the type of vapor retarder required within each climate zone, but also indicate which classes of systems are not to be installed.
- Section 1405.3.1 now specifically prohibits the use of certain low permeability vapor retarders within the warmer climate zones.
- Class I vapor barriers are not permitted to be installed on interior walls



1603.1.3 Roof Snow Load Data

- Section was modified to require two additional items related to snow load drifting to be identified on the construction documents:
  - Snow drift surcharge
  - Snow drift width


Snow drift on roof

1603.1.7 Flood Design Data

- The term "subject to high-velocity wave action" has been replaced with "coastal high hazard areas" in several chapters and sections of the code to be consistent with the terminology used in ASCE 24, Flood Resistant Design and Construction.
- The ASCE 24 standard has also been updated (ASCE 24-14)


Coastal high hazard area

1603.1.8.1 Photovoltaic Panel Systems and 1607.12.5 Photovoltaic Panel Systems

- The dead load of any rooftop-mounted photovoltaic (PV) solar panels must now be identified on the construction documents.
- New sections have also been added to address the design requirements for roof structures supporting such PV panels.


Roof-mounted photovoltaic panel

1704.2 Special inspections, Exceptions

- Exception 1 is clarified to mean such requirements can be "waived;" and
- Exception 2 no longer is due to whether a seal is required, but is based on the size and type of project.
- A Group U was added as an exception
- The term 'tests" were added along with the previous "inspections" so such requirements and exceptions also apply to "tests."

1704.5 Submittals to the Building Official

- Requirements for submittal of reports and certificates related to construction that is subject to special inspections and tests are now clearly specified (potentially seven (7) specific types of information).

1705.2.3 Open-Web Steel Joists and Joist Girders

- Special inspections are now required during the installation of open web steel joists and joist girders
- A new table specifies the type of inspection and applicable referenced standard.


Open web steel joists

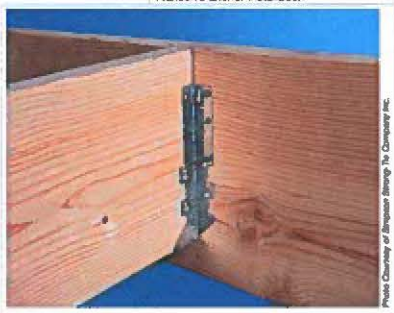
1705.3 Concrete Construction

- Added requirements and inspections for "adhesive anchors"
- Deleted some references to allowable stress design anchorage procedure


Adhesive anchor installation

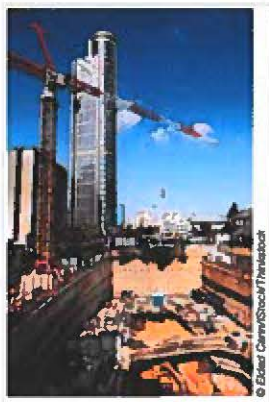
1711.1 Joist hangers

- Requirements for testing joist hangers have been deleted entirely.


Joist hanger

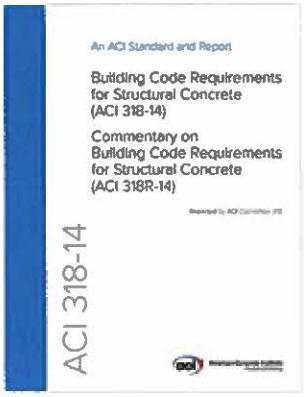
1804.1 Excavation near Foundations

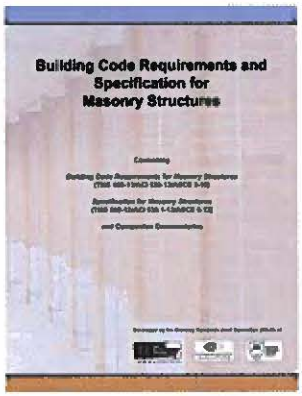
- There are now requirements for the design and sequencing of any underpinning.


Foundation excavation

1904.1 Structural Concrete

- Code requirements deleted and replaced with reference to standard ACI 318





2101.2 Design Methods

- Code now references applicable standard for masonry design methods

2103 Masonry Construction Materials; 2104 Masonry Construction; and 2105 Masonry Quality Assurance

- Such requirements now reference the masonry standards.

2111 Masonry Fireplaces and 2113 Masonry Chimneys

- Definitions, "masonry fireplace" and "masonry chimney" relocated to Ch. 2
- Requirements for reinforcement and anchorage of masonry fireplaces and chimneys are updated and reorganized to clarify intent

Brick chimney collapse

2210.1.1.3 Composite Slabs on Steel Decks

- Steel Deck Institute standard added to Ch. 35, addressing design and construction of composite concrete slabs and steel decks

Steel deck
Photo Courtesy of the Steel Deck Institute www.sdi.org

2211.1 General

- A new American Iron and Steel Institute standard, AISI S220, is now referenced for the construction of cold-formed steel light-frame non-structural products.

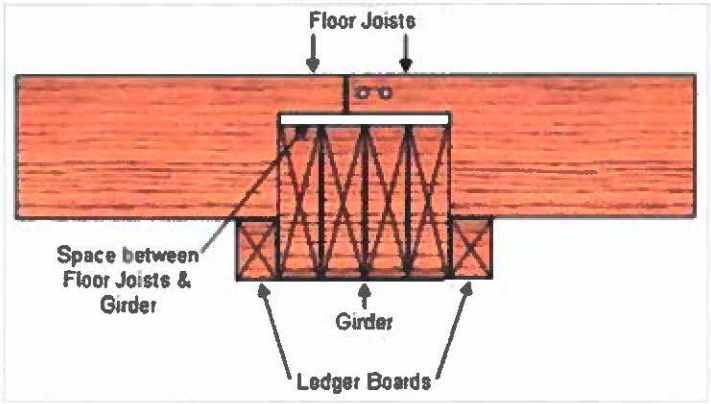

Cold-formed steel construction

2303.1.4 Structural Glued Cross-Laminated Timber

- A new definition for a wood-based product identified as cross-laminated timber (CLT) has been added to Chapter 2.
- The new manufacturing standard ANSI/APA PRG 320 is now referenced in Chapter 23 and has been added to Chapter 35.

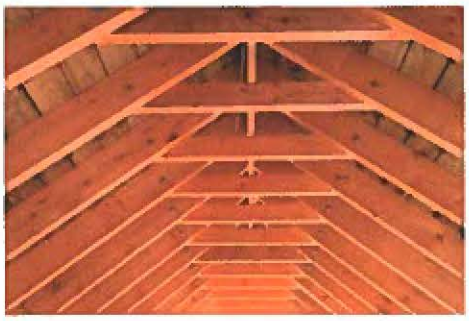
Tables 2308.4.1.1(1) and (2)

- Spans updated to address use of Southern Pine No. 2 In lieu of Southern Pine No. 1.
- Footnotes were added to clarify that header spans are based on laterally braced assumption such as when the header is raised.



Tables 2308.7.1(1) and (2) for Ceiling Joist Spans; and Tables 2308.7.2(1), (2), (3), (4), (5), and (6) for Rafter Spans

- Ceiling joist and rafter span tables from the IRC have now been incorporated into the conventional construction provisions of the IBC.



Tables 2308.8(1) and (2); 2308.10.2(1) and (2); 2308.10.3(1), (2), (3), (4), (5) and (6)

- IBC tables are now used instead of Virginia-amended tables.
- 2015 IBC tables are the same as those from the 2012 VCC

2603.5.5 Vertical and Lateral Fire Propagation

- Exception #1 can now apply to all one-story buildings provided they do not have combustible exterior wall coverings.

2612 Plastic Composites

- New definitions and applicable test standards address use of plastic composites as exterior deck boards, stair treads, handrails and guards.

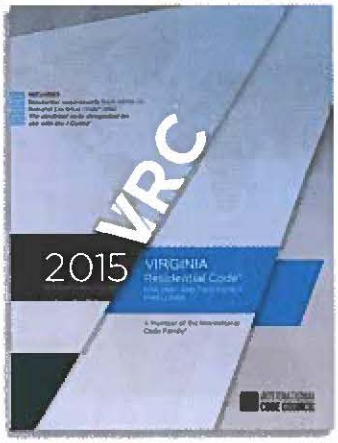
Plastic composite decking

3004 Hoistway Venting

- Hoistway venting requirements have been deleted. 3004 is now 'Conveying Systems'.

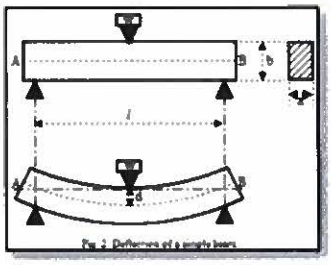
Notes

2015 Virginia Residential Code



- ❑ Table R301.7 New Deflection Criteria
- ❑ R303.4 Mechanical Ventilation
- ❑ R308.4.2 Glazing Adjacent to Doors
- ❑ R308.4.5 Glazing and Wet Surfaces
- ❑ R308.4.7 Glazing adjacent to Bottom Stair Landing
- ❑ R310.3.2.1 Drainage Required for Bulkheads
- ❑ R310.5, 310.6 EERO for Additions, Alterations, and Repairs
- ❑ R312.1.1 Height
- ❑ R322.1, 322.2 Flood Hazards
- ❑ R322.3 Coastal High-Hazard Areas
- ❑ R331 Interior Passage
- ❑ R314 Smoke Alarms
- ❑ R404.1.1 Design Required (foundation walls)
- ❑ R408.2 Openings for Under-Floor Ventilation
- ❑ R507.2 Deck Ledger Connection to Band Joist
- ❑ R602.7 Headers
- ❑ R602.7.1 Single Member Headers
- ❑ R602.7 Header Tables
- ❑ R802.2 Design and Construction
- ❑ R1003.18 Chimney Clearances

R301.7 New Deflection Criteria



- Table R301.7 has been modified to include additional categories for ceilings and exterior walls
- Footnote a has been modified to clarify that component and cladding loads should be obtained from Table R301.2(2)

Complete table shown on next page

Table R301.7

STRUCTURAL MEMBER	ALLOWABLE DEFLECTION
Rafters having slopes greater than 3:12 with finished ceiling not attached to rafters	*L*/180
Interior walls and partitions	*H*/180
Floors	*L*/360
Ceilings with brittle finishes (including plaster and stucco)	*L*/360
Ceilings with flexible finishes (including gypsum board)	*L*/240
All other structural members	*L*/240
Exterior walls—wind loads[a] with plaster or stucco finish	*H*/360
Exterior walls—wind loads[a] with other brittle finishes	*H*/240
Exterior walls—wind loads[a] with flexible finishes	*H*/120[d]
Lintels supporting masonry veneer walls[e]	*L*/600

Note: *L* = span length, *H* = span height.

a. For the purpose of the determining deflection limits herein, the wind load shall be permitted to be taken as 0.7 times the component and cladding (ASD) loads obtained from Table R301.2(2).

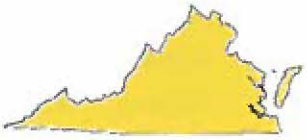
b. For cantilever members, *L* shall be taken as twice the length of the cantilever.

c. For aluminum structural members or panels used in roofs or walls of sunroom additions or patio covers, not supporting edge of glass or sandwich panels, the total load deflection shall not exceed *L*/60. For continuous aluminum structural members supporting edge of glass, the total load deflection shall not exceed *L*/175 for each glass lite or *L*/60 for the entire length of the member, whichever is more stringent. For sandwich panels used in roofs or walls of sunroom additions or patio covers, the total load deflection shall not exceed *L*/120.

d. Deflection for *exterior walls* with interior gypsum board finish shall be limited to an allowable deflection of *H*/180.

e. Refer to Section R703.8.2.

R303.4 Mechanical Ventilation



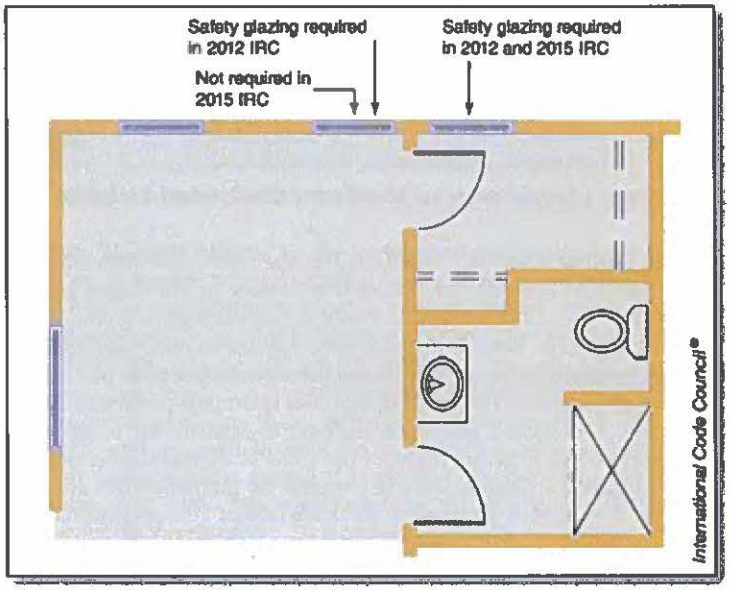
2015 Code: Dwelling units shall be provided with mechanical ventilation in accordance with Section M1507

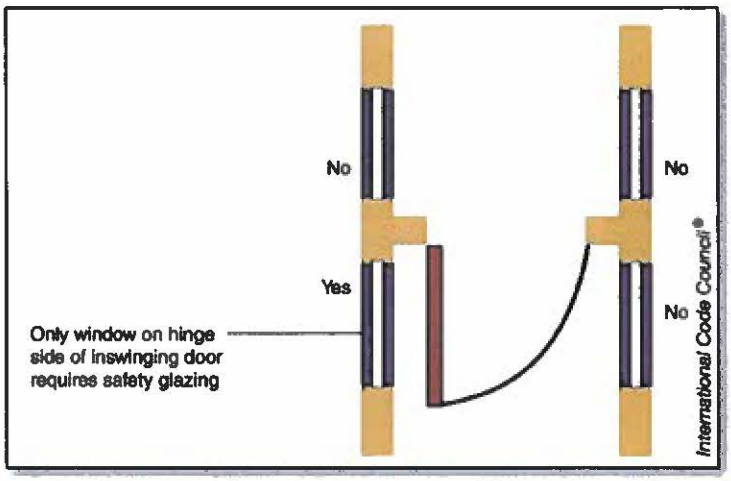
R308.4.2 Glazing Adjacent to Doors

Change Type: Modification

Change Summary:

Glazing installed perpendicular to a door in a closed position and within 24 inches of the door only requires safety glazing if it is on the hinge side of an in-swinging door.





R308.4.5 Glazing and Wet Surfaces

R308.4.5 Glazing and wet surfaces.

Glazing in walls, enclosures or fences containing or facing hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers and indoor or outdoor swimming pools shall be considered a hazardous location if located less than 60 inches (1524 mm) measured horizontally, in a straight line, from the water's edge and the bottom exposed edge of the glazing is less than 60 inches (1524 mm) measured vertically above any standing or walking surface. This shall apply to single glazing and each pane in multiple glazing.

R308.4.7 Glazing at Stair Landings

The horizontal measurement of the 60 inches now takes place in the form of an arc.

R308.4.7 Glazing adjacent to the bottom stair landing

Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches (914 mm) above the landing and within a 60-inch (1524 mm) horizontal arc less than 180 degrees from the bottom tread nosing shall be considered to be a hazardous location.

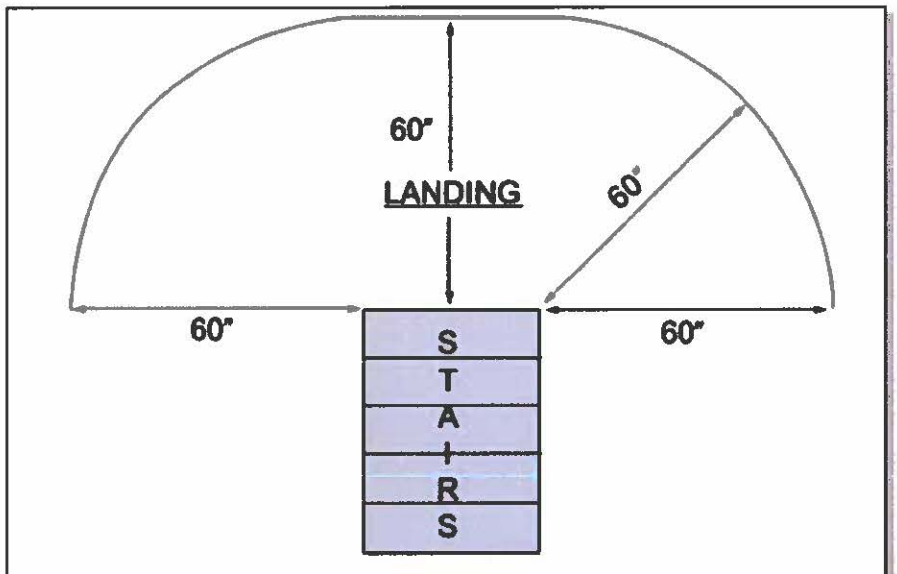


FIGURE R308.4.7
PROHIBITED GLAZING LOCATIONS AT BOTTOM STAIR LANDINGS

R310.3.2.1 Drainage Required for Bulkhead Enclosures

Change Type: New section under R310.3.2 Bulkhead Enclosures

R310.3.2.1 Drainage
Bulkhead enclosures shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section R405.1 or by an *approved* alternative method
Exception: Drainage system not required for Group I soils as detailed in Table R405.1

R310.5, 310.6 Emergency Escape and Rescue Openings (EERO) for Additions, Alterations, and Repairs

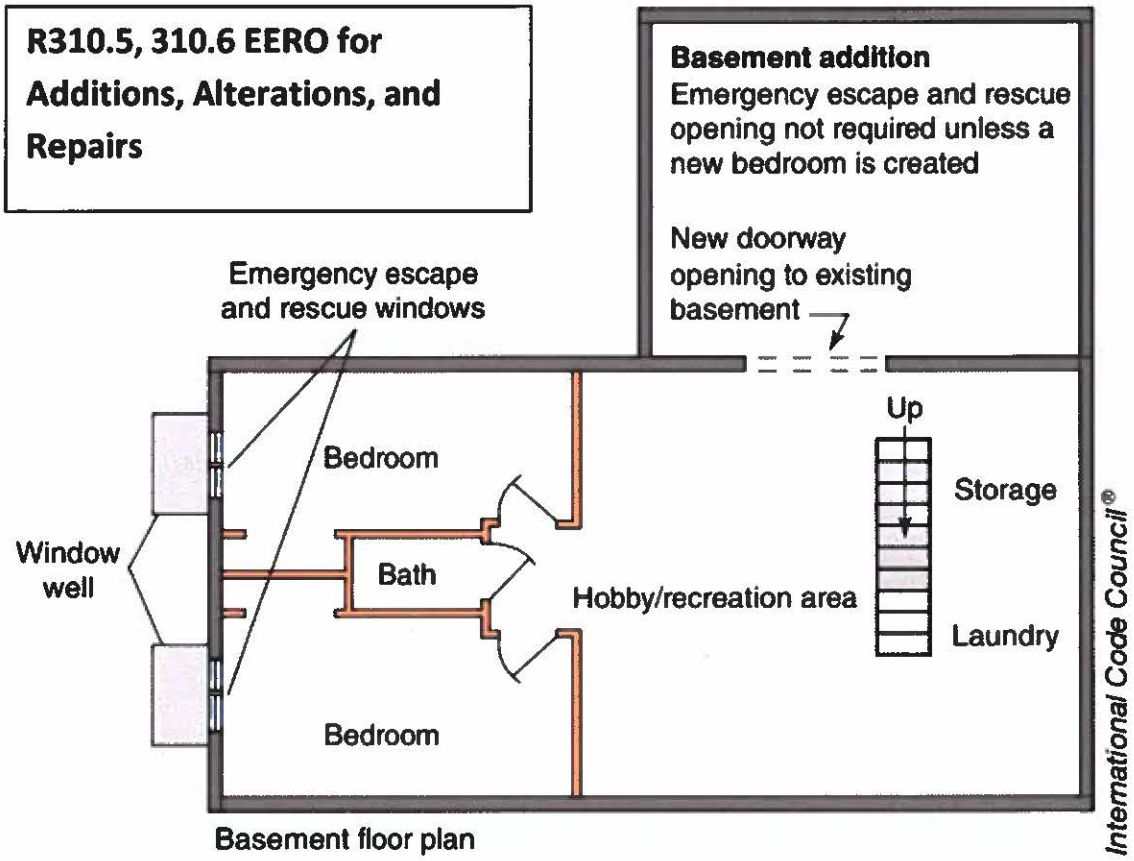
Change Type: Clarification
Change Summary:
The basement of a dwelling addition does not require an emergency escape and rescue opening if there is access to a basement that does have an emergency escape and rescue opening. Remodeling of an existing basement does not trigger the emergency escape and rescue opening requirements unless a new bedroom is created.

R310.5 Dwelling additions. Where dwelling additions occur that contain sleeping rooms, an emergency escape and rescue opening shall be provided in each new sleeping room. Where dwelling additions occur that have basements, an emergency escape and rescue opening shall be provided in the new basement.
Exceptions:

1. An emergency escape and rescue opening is not required in a new basement that contains a sleeping room with an emergency escape and rescue opening.
2. An emergency escape and rescue opening is not required in a new basement where there is an emergency escape and rescue opening in an existing basement that is accessible from the new basement.

R310.6 Alterations or repairs of existing basements.
An emergency escape and rescue opening is not required where existing basements undergo alterations or repairs.
Exception:
New sleeping rooms created in an existing basement shall be provided with emergency escape and rescue openings in accordance with Section R310.1.

R310.5, 310.6 EERO for Additions, Alterations, and Repairs



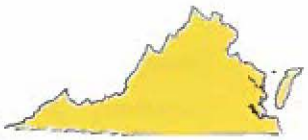
A basement addition does not require an emergency escape and rescue opening if access is provided to the existing basement.

R312.1.2 Height

- Guard height is no longer measured from the surface of adjacent fixed seating.
- This change aligns the IRC requirements with those in the IBC

R331 Interior Passage

- Now R331 (Moved out of Means of Egress section to its own section)
- Section has been rewritten to improve clarity



R331.1 General. This section applies to new dwelling units that have both a kitchen and a living area on the same floor level as the egress door required by Section R311.2. **This section is not applicable to additions, reconstruction, alteration, or repair.**

- New sections are grouped by room type
- All refer to requirements in R331.6, and outline when openings must comply with the 34" requirement

R331.6 Opening widths. Opening widths along the interior passage route required by this section shall comply with the following:

1. Cased openings shall provide a minimum 34 inch (864 mm) clear width.
2. Doors shall be a nominal 34 inch (864 mm) minimum width. Double doors are permitted to be used to meet this requirement.

R331.2 Kitchen. One interior passage route from the egress door to the kitchen shall comply with R331.6.

R331.3 Living area. One interior passage route from the egress door to at least one living area shall comply with R331.6.

R331.4 Bedroom. Where the dwelling unit has a bedroom on the same floor level as the egress door, one interior passage route from the egress door to at least one bedroom shall comply with R331.6.

R331.5 Bathroom. Where a dwelling unit has a bathroom on the same floor level as the egress door, and the bathroom contains a water closet, lavatory, and bathtub or shower, one interior passage route from the egress door to at least one bathroom shall comply with R331.6. Bathroom fixture clearances shall comply with R307 and access to fixtures is not required to comply with R331.6.

R314 Smoke Alarms

Change Type: Modification

Summary - two significant changes:

- Household fire alarm systems no longer require monitoring by an approved supervising station. (314.7.3)
- New provisions address smoke alarms installed near bathrooms and cooking appliances. (314.3 and 314.3.1)

R314.7.3 Permanent Fixture

Summary: Language requiring that the system be monitored by an approved supervising station and maintained in accordance with NFPA 72 was deleted.

R314.7.3 Permanent Fixture

Where a household fire alarm system is installed, it shall become a permanent fixture of the occupancy, owned by the homeowner.

R314.3 Location (Smoke alarms near bathrooms)

Summary: A new item #4 addresses smoke alarm distance from a bathroom with a tub or shower.

4. Smoke alarms shall be installed not less than 3 feet (914mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by Section R314.3

R314.3.1 Smoke Alarms Near Cooking Appliances

- This section is new for VA for 2015
- **R314.3.1 – Installation Near Cooking Appliances** Smoke alarms shall not be installed in the following locations unless this would prevent placement of a smoke alarm in a location required by Section R314.3
    - Ionization smoke alarms shall not be installed less than **20 feet** horizontally from a permanently installed cooking *appliance*
    - Ionization smoke alarms with an alarm-silencing switch shall not be installed less than **10 feet** horizontally from a permanently installed cooking *appliance*
    - Photoelectric smoke alarms shall not be installed less than **6 feet** horizontally from a permanently installed cooking appliance

Identifying ionization vs. photoelectric

- Ionization is most common
- "Ionization" or "photoelectric" should appear on the label, box, or instructions) *label examples next slide*
- All ionization alarms use a small amount of radioactive material called Americum 241. If you see a notice/warning regarding this, it is an ionization type alarm (or a combo alarm)

Photoelectric Detector Labels

Radioactive material = Ionization or combo alarm

R322.1, 322.2 Flood Hazards (Code text in this section shown in 2012 to 2015 comparison format)

R322.1 General Buildings and structures constructed in whole or in part in flood hazard areas, including A or V Zones and Coastal A Zones, as established in Table R301.2(1), and substantial improvement and restoration of substantial damage of buildings and structures in flood hazard areas, shall be designed and constructed in accordance with the provisions contained in this section. Buildings and structures that are located in more than one flood hazard area shall comply with the provisions associated with the most restrictive flood hazard area. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

R322.1.1 Alternative Provisions As an alternative to the requirements in Section R322, ~~R322.3 for buildings and structures located in whole or in part in coastal high-hazard areas (V Zones) and Coastal A Zones, if delineated~~, ASCE 24 is permitted subject to the limitations of this code and the limitations therein.

R322.2 Flood Hazard Areas (including A Zones).
Areas that have been determined to be prone to flooding and that are not subject to high-velocity wave action shall be designated as flood hazard areas. Flood hazard areas that have been delineated as subject to wave heights between 11/2 feet (457 mm) and 3 feet (914 mm) or otherwise designated by the jurisdiction shall be designated as Coastal A Zones and are subject to the requirements of Section R322.3. Buildings and structures constructed in whole or in part in flood hazard areas shall be designed and constructed in accordance with Sections R322.2.1 through R322.2.3.

R322.2.1 Elevation Requirements

1. Buildings and structures in flood hazard areas, ~~not~~ including flood hazard areas designated as Coastal A Zones, shall have the lowest floors elevated to or above the base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.

~~2. Buildings and structures in flood hazard areas designated as Coastal A Zones shall have the lowest floors elevated to or above the base flood elevation plus 1 foot (305mm), or to the design flood elevation, whichever is higher.~~

2. ~~3.~~ In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated to a height above the highest adjacent grade of not less than ~~at least as high above~~ the depth number specified in feet (mm) on the FIRM plus 1 foot (305 mm), or not less than 3 feet (915 mm) ~~or at least 2 feet (610mm)~~ if a depth number is not specified.

3. 4. Basement floors that are below grade on all sides shall be elevated to or above base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.

Exception: Enclosed areas below the design flood elevation, including basements with floors that are not below grade on all sides, shall meet the requirements of Section R322.2.2.

R322.3 Coastal High-Hazard Areas (Code text in this section shown in 2012 to 2015 comparison format)

R322.3 Coastal high-hazard areas (including V Zones and Coastal A Zones, where designated).
Areas that have been determined to be subject to wave heights in excess of 3 feet (914 mm) or subject to high-velocity wave action or wave-induced erosion shall be designated as coastal high-hazard areas. Flood hazard areas that have been designated as subject to wave heights between 1 1/2 feet (457 mm) and 3 feet (914 mm) or otherwise designated by the jurisdiction shall be designated as Coastal A Zones. Buildings and structures constructed in whole or in part in coastal high-hazard areas and coastal A Zones, where designated, shall be designed and constructed in accordance with Sections R322.3.1 through R322.3.7.

R322.3.3 Foundations. Buildings and structures erected in coastal high-hazard areas and Coastal A Zones shall be supported on pilings or columns and shall be adequately anchored to such pilings or columns. The space below the elevated building shall be ...(remainder of section is unchanged – see full code section for details.)

Exception: In Coastal A Zones, stem wall foundations supporting a floor system above and backfilled with soil or gravel to the underside of the floor system shall be permitted provided the foundations are designed to account for wave action, debris impact, erosion and local scour. Where soils are susceptible to erosion and local scour, stem wall foundations shall have deep footings to account for the loss of soil.

R404.1.1 Design Required (Concrete or Masonry Foundation Walls)

Summary: Modified section now specifies when masonry foundation walls must be engineer designed

R404.1.1 Design Required

Concrete or masonry foundation walls shall be designed in accordance with accepted engineering practice where either of the following conditions exists.

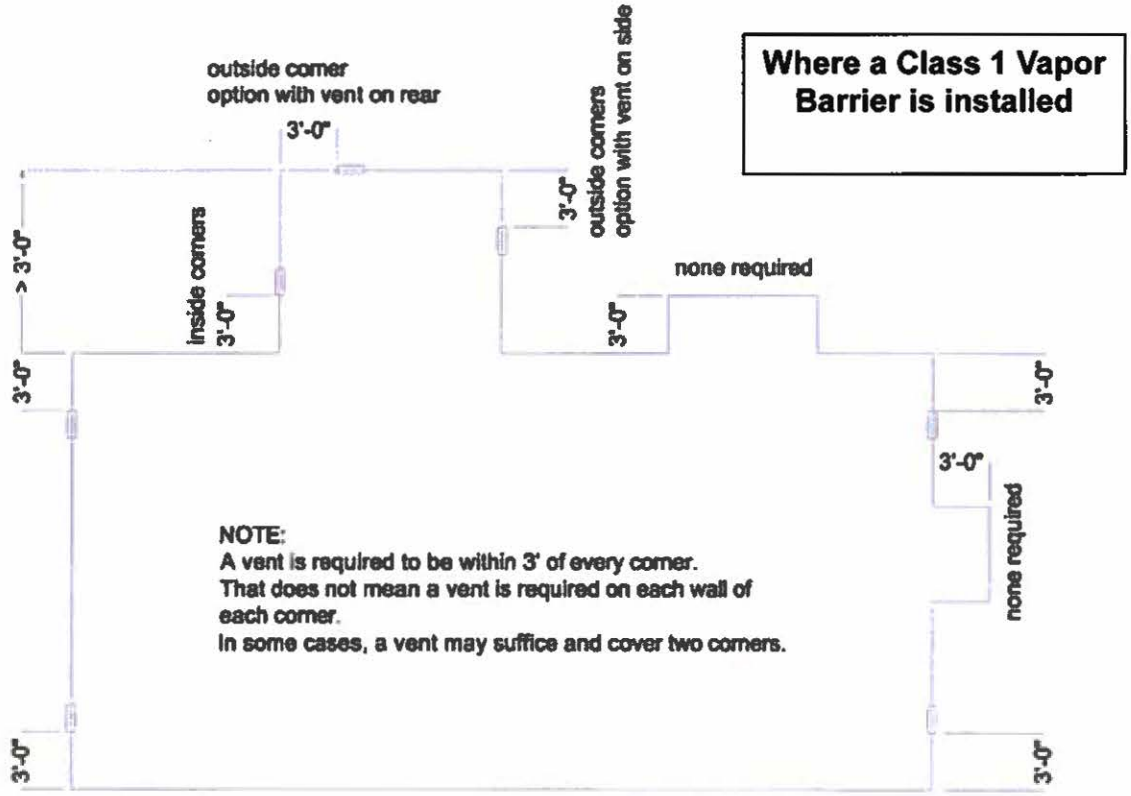
1. Walls are subject to hydrostatic pressure from ground water.
2. Walls supporting more than 48 inches (1219mm) of unbalanced backfill that do not have permanent lateral support at the top or bottom.

R408.2 Openings for Under-Floor Ventilation

Existing exception language, with the addition of:

"nor shall the required openings need to be within three feet of each corner provided there is cross ventilation of the space."

Explanation: This change clears up when and where foundation vents are required to be installed in conventional crawlspace construction. "Bump outs" 3 feet or less do not require foundation vents in the corners **when vapor retarder material installed**



R507.2 Deck Ledger Connection to Band Joist

Change Type: Clarification

Change Summary: The deck ledger section is reorganized to better describe the minimum requirements for connection of deck ledgers to band joists.

R602.7 Headers

Change Type: Modification

Change Summary: The girder and header span tables of Chapter 5 have been moved into Chapter 6, to the header section. Multi-ply and single header tables are combined. A new section describing rim board headers is added.

R602.7.1 Single Member Headers

- 2012 did not specify the fasteners required for single member headers
- 2015 specifies single headers be face nailed to the top and bottom of the header with 10d box nails spaced 12 inches on center.

R602.7.2 Rim board headers.

Rim board header size, material and span shall be in accordance with Table R602.7(1). Rim board headers shall be constructed in accordance with Figure R602.7.2 and shall be supported at each end by full-height studs. The number of full-height studs at each end shall be not less than the number of studs displaced by half of the header span based on the maximum stud spacing in accordance with Table R602.3(5). Rim board headers supporting concentrated loads shall be designed in accordance with accepted engineering practice.

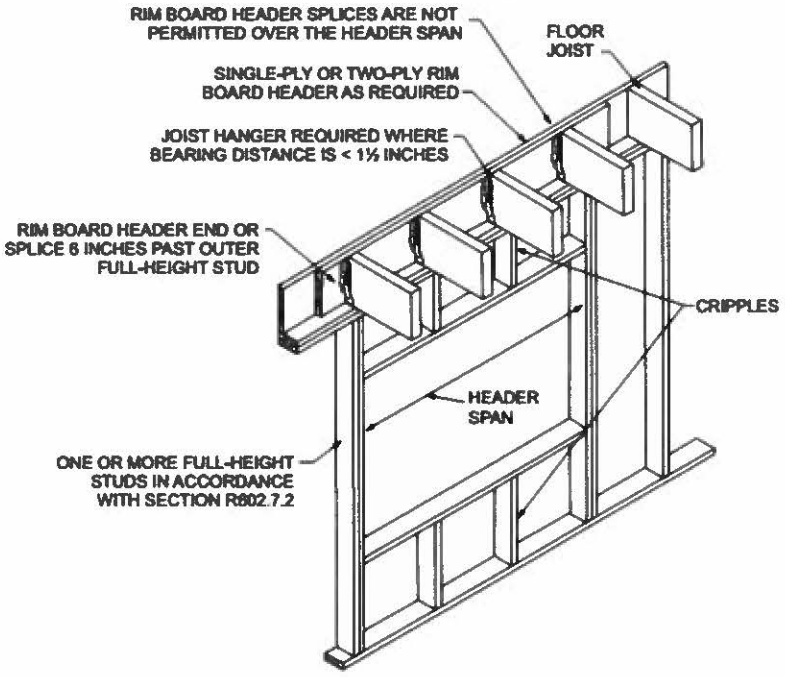
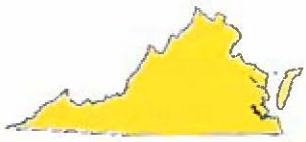


Figure R602.7.2

Rim Board Header Construction

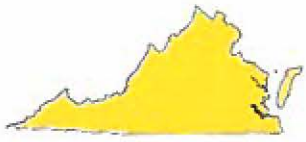
R602.7 Header Tables



There are also VA Amendments for two important tables in this section:

- Table R602.7(1) – Girder spans and header spans for exterior bearing walls
- Table R602.7(2) - Girder spans and header spans for interior bearing walls

R802.2 – Design and Construction of Wood Roof Framing



Change Type: Modifications w/Significant VA Amendments
Change Summary: This section has been significantly rewritten for clarification and ease of reading.

Final codes were not available as of this writing, so here is the changes directly from the VA USBC Final. Changes are #53-57

53. Change Sections R802.2 and R802.3 to read:
R802.2 Design and construction. The roof and ceiling assembly shall provide continuous ties across the structure to prevent roof thrust from being applied to the supporting walls. The assembly shall be designed and constructed in accordance with the provisions of this chapter and Figures R606.11(1), R606.11(2) and R606.11(3) or in accordance with AWC NDS.
R802.3 Ridge. A ridge board used to connect opposing rafters shall be not less than 1 inch (25 mm) nominal thickness and not less in depth than the cut end of the rafter. Where ceiling joist or rafter ties do not provide a continuous ties across the structure, a ridge beam shall be provided and supported on each end by a wall or girder.

54. Delete Sections R802.3.1, R802.3.2 and R802.3.3.

55. Change the titles of Tables R802.5.1(1) through R802.5.1(8) to Tables R802.4.1(1) through R802.4.1(8), change Section R802.4 and add Figure R802.4.5 and Sections R802.4.1 through R802.4.6 to read:

R802.4 Rafters. Rafters shall be in accordance with this section.

R802.4.1 Rafter size. Rafters shall be sized based on the rafter spans in Tables R802.4.1(1) through R802.4.1(8). Rafter spans shall be measured along the horizontal projection of the rafter. For other grades and species and for other loading conditions, refer to the AWC STJR.

R802.4.2 Framing details. Rafters shall be framed not more than 1-1/2 inches (38 mm) offset from each other to a ridge board or directly opposite from each other with a collar tie, gusset plate or ridge strap in accordance with Table R602.3(1). Rafters shall be nailed to the top wall plates in accordance with Table R602.3(1) unless the roof assembly is required to comply with the uplift requirements of Section R802.11.

R802.4.3 Hips and valleys. Hip and valley rafters shall be not less than 2 inches (51 mm) nominal in thickness and not less in depth than the cut end of the rafter. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition or be designed to carry and distribute the specific load at that point.

R802.4.4 Rafter supports. Where the roof pitch is less than 3:12 (25-percent slope), structural members that support rafters, such as ridges, hips and valleys, shall be designed as beams, and bearing shall be provided for rafters in accordance with Section R802.6.

R802.4.5 Purlins. Installation of purlins to reduce the span of rafters is permitted as shown in Figure R802.4.5. Purlins shall be sized not less than the required size of the rafters that they support. Purlins shall be continuous and shall be supported by 2-inch by 4-inch (51 mm by 102 mm) braces installed to bearing walls at a slope not less than 45 degrees (0.79 rad) from the horizontal. The braces shall be spaced not more than 4 feet (1219 mm) on center and the unbraced length of braces shall not exceed 8 feet (2438 mm).

R802.4.6 Collar ties. Where collar ties are used to connect opposing rafters, they shall be located in the upper third of the attic space and fastened in accordance with Table R602.3(1). Collar ties shall be not less than 1 inch by 4 inches (25 mm by 102 mm) nominal, spaced not more than 4 feet (1219 mm) on center. Ridge straps in accordance with Table R602.3(1) shall be permitted to replace collar ties.

56. Change the title of Tables R802.4(1) and R802.4(2) to Tables R802.5.1(1) and R802.5.1(2); change the title of R802.5.1(9) to Table R802.5.2; delete Figure R802.5.1; and, change Sections R802.5 and R802.5.1 to read:

R802.5 Ceiling joists. Ceiling joists shall be continuous across the structure or securely joined where they meet over interior partitions in accordance with Table R802.5.2. R802.5.1 Ceiling joist size. Ceiling joists shall be sized based on the joist spans in Tables R802.4(1) and R802.4(2). For other grades and species and for other loading conditions, refer to the AWC STJR.

57. Add Sections R802.5.2 through R802.5.2.3 to read:

R802.5.2 Ceiling joist and rafter connections. Where ceiling joists run parallel to rafters, they shall be connected to rafters at the top wall plate in accordance with Table R802.5.2. Where ceiling joists are not connected to the rafters at the top wall plate, they shall be installed in the bottom third of the rafter height in accordance with Figure R802.4.5 and Table R802.5.2. Where the ceiling joists are installed above the bottom third of the rafter height, the ridge shall be designed as a beam. Where ceiling joists do not run parallel to rafters, the ceiling joists shall be connected to top plates in accordance with Table R602.3(1). Each rafter shall be tied across the structure with a rafter tie or a 2-inch by 4-inch (51 mm x 102 mm) kicker connected to the ceiling diaphragm with nails equivalent in capacity to Table R802.5.2.

R802.5.2.1 Ceiling joists lapped. Ends of ceiling joists shall be lapped a minimum of 3 inches (76 mm) or butted over bearing partitions or beams and toenailed to the bearing member. Where ceiling joists are used to provide resistance to rafter thrust, lapped joists shall be nailed together in accordance with Table R802.5.2, and butted joists shall be tied together in a manner to resist such thrust. Joists that do not resist thrust shall be permitted to be nailed in accordance with Table R602.3(1). Wood structural panel roof sheathing, in accordance with Table R503.2.1.1(1), shall not cantilever more than 9 inches (229 mm) beyond the gable endwall unless supported by gable overhang framing.

R802.5.2.2 Rafter ties. Wood rafter ties shall be not less than 2 inches by 4 inches (51 mm by 102 mm) installed in accordance with Table R802.5.2 at each rafter. Other approved rafter tie methods shall be permitted.

R802.5.2.3 Blocking. Blocking shall be not less than utility grade lumber.

R1003.18 Chimney Clearances

Change Type: Modification

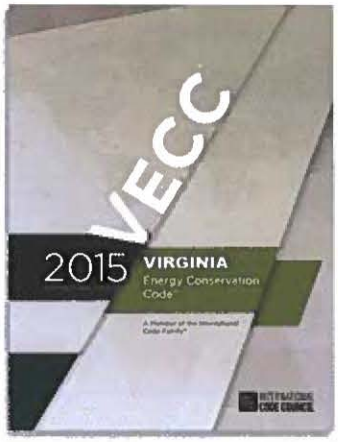
Change Summary:

- The 2012 version required 12" clearance from inside surface of nearest flue for exposed combustible trim and limited overlap to 1"
- For 2015, this changes to 8" clearance from inside surface of nearest flue and the overlap language has been removed

Notes

Notes

2015 Virginia Energy Conservation Code



- ❑ R401.2
- ❑ R402.1.1/N1102.1.1
- ❑ R402.1.3/N1102.2.3
- ❑ R402.2.8/N1102.2.8
- ❑ R402.4.2/N1102.4.2
- ❑ R402.4.4/N1102.4.4
- ❑ R403.3.3/ N1103.3.3
- ❑ R403.3.5/N1103.3.5
- ❑ R404.1/N1101.1
- ❑ R405.5.2/N1105.5.2
- ❑ C402.1.1
- ❑ C402.1.2
- ❑ C402.2.3
- ❑ C402.4.3
- ❑ C402.5.3
- ❑ C402.5.7
- ❑ Table C403.2.3
- ❑ C403.2.6.3
- ❑ Table C403.2.14
- ❑ C403.2.15 – C403.2.17
- ❑ C404.4
- ❑ C404.5
- ❑ C404.6
- ❑ C405.2.1
- ❑ C405.2.1.1
- ❑ C405.2.2
- ❑ C405.2.2.1
- ❑ C405.2.3
- ❑ C405.4.2
- ❑ C405.6
- ❑ C405.7
- ❑ C405.8
- ❑ C405.9
- ❑ C405.9.1
- ❑ C405.9.2
- ❑ C406

Residential Energy Provisions

R401.2/N1101.13 Compliance

- Projects shall comply with one of the following:
  - Sections 401-404
  - Section 405 with 401-404 Mandatory
  - Section 406 Energy Rating Index

R402.1.1/N1102.1.1 Vapor Retarder

- Wall assemblies in the building thermal envelope shall comply with the vapor barrier requirements of IRC R702.7 or IBC 1405.3, as applicable
- A class I barrier is not permitted to be installed on interior walls

R402.1.3/N1102.1.3 R-Value Computation

- R-value of insulated siding is reduced by 0.6

R402.2.8/N1102.2.8 Floors

- Formerly R402.2.7
- New exception allows insulation to not be in contact with underside of floor, where ends/sides are insulated to required value

R402.4.2/N1102.4.2 Fireplaces

- Wood-burning fireplaces may have doors instead of tight fitting dampers
- Door must be listed and labeled for this use

R402.4.4/N1102.4.4 Rooms Containing Fuel-Burning Appliances

- Shall be isolated from building thermal envelope;
- or if within thermal envelope, must be in a room isolated from building thermal envelope
  - Lists specific criteria for such a room
- Exceptions
  - Direct-vent appliances
  - Fireplaces complying with 901-905 of IMC

R403.3.3/N1103.3.3 Duct Testing

- Visual testing option has been removed
- Must have test results before house is approved for CO

R403.3.5/N1103.3.5 Building Cavities

- Building cavities shall not be used as ducts
- ICC ruled IECC superseded IMC in this case

R404.1/N1104.1 Lighting Equipment

- Now requires 75% of lamps to be high efficacy

R405.5.2/N1105.5.2 Residence Specifications

- New reference table number R402.1.2/N1102.1.2

Commercial Energy Provisions

C402.1.1 Low-Energy Buildings (exemptions)

- Only exempt from thermal envelope provisions
  - All buildings that use less than 3.4 btu/sqft or 1 .0 watt/sqft
  - Those that do not contain conditioned space
  - Greenhouses

C402.1.2 Equipment Buildings

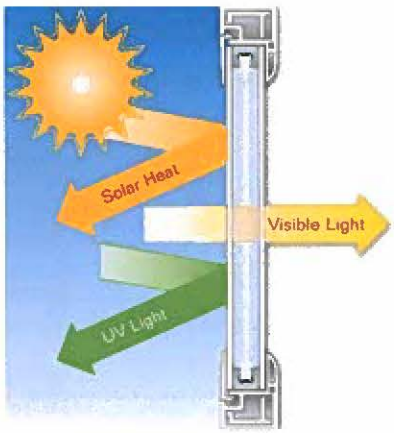
- Exempt if meet one of the following conditions
  1. Separate buildings w floor area not more than 500 sqft
  2. Those intended to house electronic equipment; totaling < 7 watts/sqft; and no human occupancy
  3. Having heating system not greater than 17k btu/hr; thermostat setting <50°f
  4. Avg wall & roof U-factor < 0.2

C402.2.3 Thermal Resistance of Above-Grade Walls

- Detailed definition of mass walls:
  - Weighing not < 35 psf
  - Weighing not < 25psf where material weight not > 120 pcf
  - Having heat capacity > 7btu/sqft
  - Having heat capacity > 5 btu/sqft where material weight not > 120 pcf

C402.4.3 Maximum U-Factor

- U-Factors amended to maintain 2012 level



C402.5.3 Rooms Containing Fuel-Burning Appliances

- Shall be isolated from building thermal envelope;
- or if within thermal envelope, must be in a room isolated from building thermal envelope
  - Lists specific criteria for such a room
- Exceptions
  - Direct-vent appliances
  - Fireplaces complying with 901-905 of IMC

C402.5.7 Vestibules

- New exception #6
- May instead use air curtain tested in accordance with ANSI/AMCA 220

Table C403.2.3 Minimum Efficiency Requirements

- New efficiency requirements throughout
- For example:
    - Air cooled air conditioner
        - 2012: 12.5 SEER
        - 2015: 13 SEER

C403.2.6.3 Ventilation

- Previous C403.2.5 relocated to C403.2.6.3
- References IMC for mechanical ventilation rates required for dwelling units

Table C403.2.14 Minimum Efficiency Requirements: Commercial Refrigeration

- Added commercial refrigeration requirements

C403.2.15 – C403.2.17 Coolers, Freezers and Refrigeration

- Commercial refrigeration prescriptive requirements added
- Includes:
  - Walk-in coolers, Walk-in freezers, refrigerated warehouse coolers, refrigerated warehouse freezers

C404.4 Insulation of Piping (service water heating)

- New requirements for insulating such piping
- 7 exceptions apply

C404.5 Efficient Heated Water Supply Piping

- New limits on heated water supply flow rate, pipe volume, and lengths

C404.6 Heated-Water Circulating and Temperature Maintenance Systems

- New requirements for heat trace temperature maintenance systems

C405.2.1 Occupant Sensor Controls

- 12 new locations required for occupant sensor controls

C405.2.1.1 Occupancy Sensor Control Function

- Warehouses excepted from this section
- Controls shall:
  1. Turn off within 30 minutes of occupants leaving space
  2. Be manual on or controlled to automatically turn lighting on to not > 50% power
  3. Incorporate manual control to allow occupants to turn light off
- Exception for fully automated systems

C405.2.2 Timed Switch Controls

- Where dimmers are supplied, timed switch controls not required in:
  - Sleeping units
  - Patient care spaces
  - Spaces where automatic shutoff would endanger occupant safety
  - Lighting not intended for continuous operation
  - Shop and laboratory classrooms

C405.2.2.1 Timed-Switch Control Function

- New function requirements added

C405.2.3 Day Lighting Controls

The following sections have been completely revised regarding new requirements for daylight zones and the required controls for lighting:

- C405.2.3 Daylight-Responsive Controls
- C405.2.3.1 Daylight-Responsive Control Function
- C405.2.3.2 Sidelight Daylight Zone
- C405.2.3.3 Toplight Daylight Zone

C405.4.2 Interior Lighting Power

- This section has been revised, and tables C405.4.2 (1) & C405.4.2 (2) expanded for requirements on lighting budgets.

C405.6 Electrical Energy Consumption (Mandatory)

- Requires a separate electrical meter for each R-2 dwelling unit

C405.7 Electrical Transformers Mandatory

- New mandatory requirements per Table C405.7
- 14 exceptions

C405.8 Electrical Motors Mandatory

- New efficiency tables for electric motors

C405.9 Vertical and Horizontal Transportation Systems and Equipment

- New efficiency requirements for elevator cabs, escalators and moving walks

C405.9.1 Elevator cabs

- Luminaires, ventilation efficiency requirements added

C405.9.2 Escalators and Moving Walks

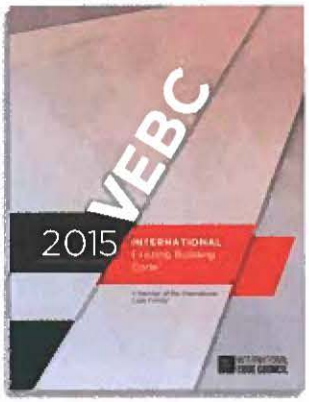
- Requires speed reduction when not carrying passengers
- Regenerative drive shall be provided
    - This requires compliance with NEC 705 Interconnected Electric Power Production Systems, for systems design and installation

C406 Additional Efficiency Package Options; and new list

- List expanded from 3 options to 6
- Added options:
    - 3. enhanced lighting controls
    - 5. dedicated outdoor air system for certain HVAC equipment
    - 6. High-efficiency service water heating

Notes

2015 Virginia Existing Building Code



- ❑ VCC 103.1.1
- ❑ VEBC Table of Contents
- ❑ 101.5
- ❑ Changes throughout
- ❑ 102.2
- ❑ 103.10
- ❑ 202 Existing Building
- ❑ 202 Change of Occupancy
- ❑ 202 Repair
- ❑ 202 Work Area
- ❑ 302
- ❑ 303
- ❑ 304
- ❑ 306
- ❑ 307
- ❑ 402.5, 403.6, & 1104.1
- ❑ 402
- ❑ 403
- ❑ 404
- ❑ 404.3
- ❑ 405
- ❑ Chapter 5
- ❑ 501.1 Exception
- ❑ 602
- ❑ 603
- ❑ 604
- ❑ Alterations – reroofing
- ❑ Chapter 7
- ❑ 701.1
- ❑ 701.1 Exception
- ❑ Chapter 8
- ❑ Chapter 9
- ❑ Chapter 10
- ❑ Chapter 11
- ❑ Chapter 12
- ❑ Chapter 13
- ❑ Chapter 14

Chapter 1 Administrative Provisions

VCC 103.1.1

- The name of the code has been changed to the Virginia Existing Building Code.
- Classification of work consolidated from 5 paragraphs into 1. Simply put, if a project is submitted on an existing building or structure as defined in Chapter 2 of the 2015 VEBC, then the VEBC must be applied.

2012 VCC		2015 VCC	
Section	**Text**	**Section**	**Text**
~~**103.3**~~	~~Change of occupancy~~	**103.1.1**	Virginia Existing Building Code. Part II of the Virginia Uniform Statewide Building Code, also known as the "Virginia Existing Building Code," or the "VEBC" is applicable to construction and rehabilitation activities in existing buildings and structures, as those terms are defined in the VEBC, except where specifically addressed in the VCC.
~~**103.4**~~	~~Additions~~		
~~**103.5**~~	~~Reconstruction, alteration or repair in Group R-5 occupancies~~		
~~**103.6**~~	~~Reconstruction, alteration or repair in other occupancies~~		
~~**103.7**~~	~~Retrofit requirements~~		

VEBC Table of Contents

- Number of chapters reduced from 17 to 14, not counting references or appendices
- 2012 VRC Chapter 4 Compliance Methods has been eliminated, therefore 2012 VRC Chapters 4 (Prescriptive Compliance Method) and 14 (Performance Compliance Method) have been deleted and replaced with something else.

2012 VRC		2015 VEBC	
Chapter	Title	Chapter	Title
Chapter 3	~~Compliance methods~~	**Chapter 3**	General Provisions and Special Detailed Requirements
Chapter 4	~~Prescriptive compliance method~~	**Chapter 4**	Accessibility
Chapter 5	~~Classification of work~~	**Chapter 5**	Repairs
Chapter 6	Repairs	**Chapter 6**	Alterations
Chapter 7	Alterations ~~– Level 1~~		
Chapter 8	~~Alterations – Level 2~~		
Chapter 9	~~Alterations – Level 3~~		
Chapter 10	Change of occupancy	**Chapter 7**	Change of occupancy
Chapter 11	Additions	**Chapter 8**	Additions
Chapter 12	Historic buildings	**Chapter 9**	Historic Buildings
Chapter 13	~~Relocated or~~ moved buildings	**Chapter 10**	Moved Buildings and Structures
Chapter 14	~~Performance compliance methods~~	**Chapter 14**	Compliance alternative – Change of occupancy
Chapter 17	Retrofit requirements	**Chapter 11**	Retrofit requirements

VEBC 101.5 Use of Terminology and Notes

- When there is a reference to an international code or standard, that reference shall include any and all Virginia state amendments

Throughout VEBC

- Deleted nearly all references to International Fire Code
- Deleted all references to "dangerous" and "unsafe" provisions
- Deleted references where "subject to the approval of the building official" was in conflict with VCC Chapter 1 administrative provisions

102.2 Scope

- Change of occupancy to Group I-2 or I-3 shall comply with the provisions of the VCC.
- The VCC may be used for the reconstruction, alteration or repair of Group R-5 buildings or structures

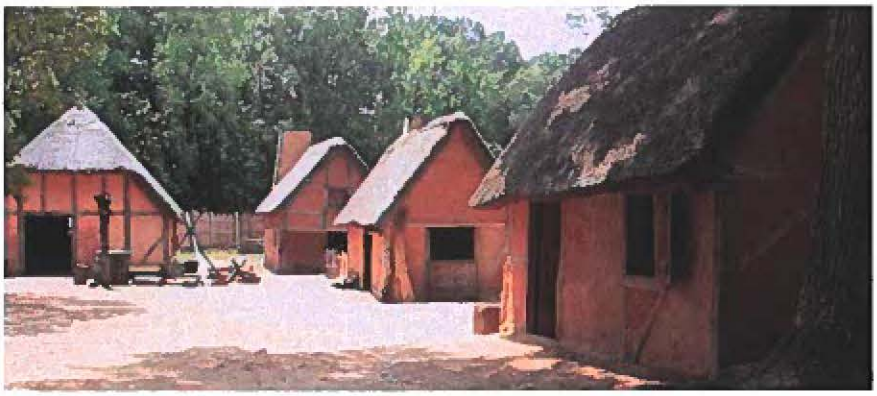
103.10 Construction Documents

- Classification of work relocated from other chapters, and is now required to be identified on such documents no matter what is being performed.
- All work areas shall be identified on construction documents, including identification of Level 1, Level 2, or Level 3 as applicable. Building officials may wave such classifications when the scope of work does not warrant it.

VEBC Chapter 2 Definitions

202 Existing Building

- Added, "or approved by the building official when no legal certificate of occupancy exists" in order to address buildings and structures where a certificate of occupancy did not exist.



202 Change of Occupancy

- Definition updated to include six "greater degrees" previously located as code provisions in VCC 103.3.

202 Repair

- Now includes "reconstruction…to correct damage"
- Work that may have been classified as alterations under the 2012 VRC may now qualify as a repair under the 2015 VEBC

202 Work Area

- Term "reconfigured space" has been deleted from the definition, and throughout the VEBC, and replaced with the addition, relocation, or removal of walls.
- New definition clarifies that the "work area" only includes the intended area of work, and excludes adjacent rooms or spaces affected by the intended work
- List of exclusions has been expanded

Chapter 3: Special Requirements

302 Building Materials and Systems

- Provisions relocated and consolidated from 2012 VRC sections 401.1, 602, 702, 803, 903, and 1003

303 Fire Escapes

- Provisions relocated and consolidated from 2012 VRC sections 405 and 805.3.1.2

304 Glass Replacement and Replacement Windows

- Provisions relocated and consolidated from 2012 VRC sections 406 and 602.3

306 Group B Teaching and Research Laboratories

- Increased quantities allowed for hazardous material in higher education labs provided they comply with other requirements

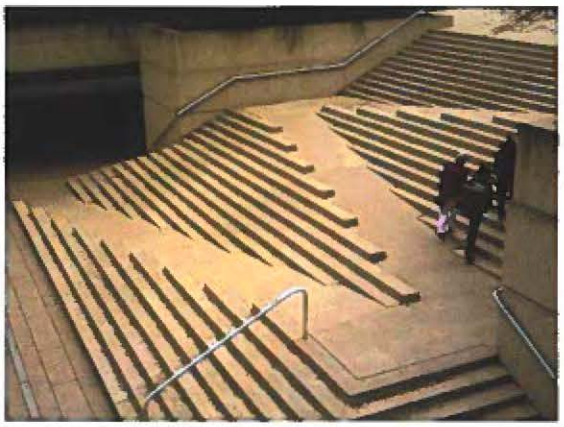
307 Reroofing and Roof Repair

- No longer considered a level 1 alteration, therefore would not trigger requirements such as accessibility
- Requirements relocated from VCC 1510, as they do not apply to new construction

Deletions

- Level 1 alteration no longer automatically triggers smoke alarm retrofit for group I-2 or R
- 2015 VEBC does require smoke alarms for alterations to sleeping rooms in group I-2 or R

Chapter 4: Accessibility



402 Change of Occupancy

- Provisions relocated and consolidated from 2012 VRC sections 410.4, 1006, 1012.8, and 1401.2.5

403 Additions

- Provisions relocated and consolidated from 2012 VRC sections 410.5 and 1105

404 Alterations

- Provisions relocated and consolidated from 2012 VRC sections 410.6, 410.7, 410.8, 705, 806, 906, 1204, and 1401.2.5

404.3 Alterations Affecting an Area of Primary Function

- Both a drinking fountain and toilet facilities must be along the accessible route, and both must be accessible
- Update brings provisions into alignment with requirements of the 2010 ADA standards

405 Historic Buildings

- Provisions relocated and consolidated from 2012 VRC sections 410.9 and 1205.15

Chapter 5: Repairs

- Provisions relocated and consolidated from 2012 VRC section 404, Chapter 6, and section 1401.2.4

501.1 Exception

- Exception added to allow repairs to be performed under the code in which the building was constructed.

Chapter 6: Alterations

602 Level 1 Alterations

- Provisions relocated and consolidated from 2012 VRC Chapter 7

603 Level 2 Alterations

- Provisions relocated and consolidated from 2012 VRC Chapter 8

604 Level 3 Alterations

- Provisions relocated and consolidated from 2012 VRC Chapter 9

Alteration Provisions for Reroofing

- Deleted provisions that were more restrictive than the VCC
- Provisions in 2012 VRC sections 706.3, 606.3.1 and 706.3.2 have been deleted in the 2015 VEBC

Chapter 7: Change of Occupancy

- Overall chapter greatly simplified
- Provisions relocated and consolidated from 2012 VRC section 407, Chapter 10, section 1401.2.1, and section 1401.2.2

701.1 Exception

- Chapter 14 Performance Compliance Method is an optional alternative to the provisions of Chapter 7

701.1 Scope

- Clarifies that the intent is not to bring the entire building into compliance, but rather only as necessary to meet specific provisions of applicable codes

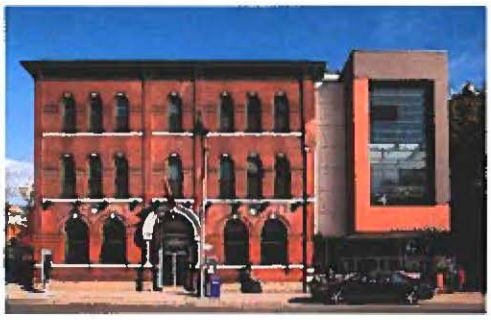
701.2 Work Undertaken in Connection with a Change of Occupancy

- Alterations, repairs or additions in connection with a change of occupancy shall comply with the provisions of those chapters as applicable.

710.1 Exception

- In other than group R or I occupancies or group E child care facilities, where occupant load is increased by 20% or less, additional plumbing fixtures are not required per the IPC based on the increased load. This does not apply where the increased fixture count is required based on occupancy, rather than increased occupancy load.
- This exception existed for alterations under the 2012 VRC, and is now extended to include Change of Occupancy as well.

Chapter 8: Additions



- Provisions relocated and consolidated from 2012 VRC section 402, Chapter 11, and section 1401.2.3

Chapter 9: Historic Buildings

- Provisions relocated and consolidated from 2012 VRC section 408, Chapter 12, and section 1401.1

Chapter 10: Moved Buildings

- Term "relocated" deleted, as that term implies an industrialized building or manufactured housing, which in Virginia are regulated under the Virginia Industrialized Building Safety Regulations, and the Virginia Manufactured Home Safety Regulations, respectively.

Chapter 11: Retrofit Requirements

- Relocated from 2012 VRC Chapter 17

Chapter 12: Construction Safeguards

- Relocated from 2012 VRC Chapter 15

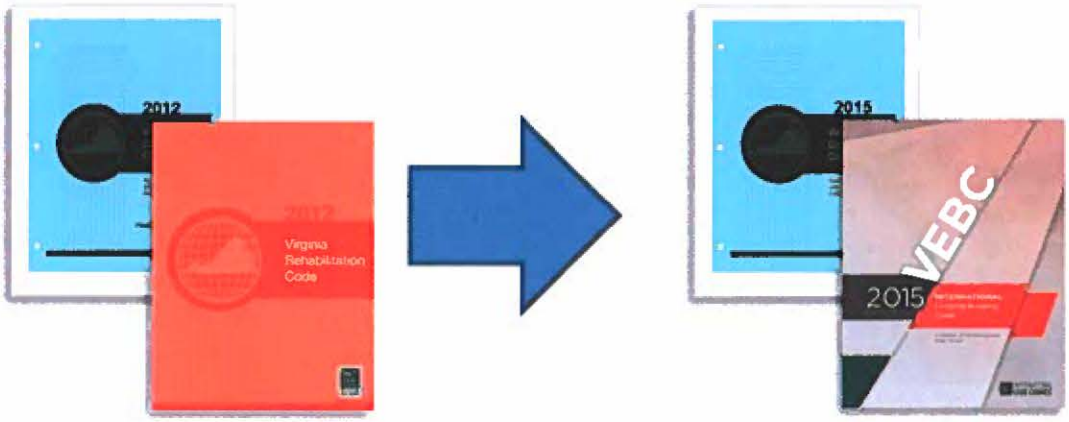
Chapter 13: Reserved

- Chapter deleted and reserved for future use

Chapter 14 Compliance Alternative for Change of Occupancy

- Provides a compliance alternative to change of occupancy, which operates the same as the 2012 VRC Performance Compliance Method (also known as the 2009 IBC Chapter 34).
- As written, this chapter or scoring method cannot be used as an alternative for additions, alterations or repair. This was not the intent. As such code officials are urged to consider allowing this chapter and method to be used as an alternative for projects also involving repairs, alterations, and/or additions as part of a code modification.

2015 Virginia Existing Building Code – Comparison Tables



USBC Administrative Provisions

2012 VCC		2015 VCC	
Section	Text	Section	Text
~~**103.3**~~	~~Change of occupancy~~	**103.1.1**	Virginia Existing Building Code. Part II of the Virginia Uniform Statewide Building Code, also known as the "Virginia Existing Building Code," or the "VEBC" is applicable to construction and rehabilitation activities in existing buildings and structures, as those terms are defined in the VEBC, except where specifically addressed in the VCC.
~~**103.4**~~	~~Additions~~		
~~**103.5**~~	~~Reconstruction, alteration or repair in Group R-5 occupancies~~		
~~**103.6**~~	~~Reconstruction, alteration or repair in other occupancies~~		
~~**103.7**~~	~~Retrofit requirements~~		

2015 VEBC Table of Contents

2012 VRC		2015 VEBC	
Chapter	**Title**	**Chapter**	**Title**
Chapter 3	~~Compliance methods~~	**Chapter 3**	General Provisions and Special Detailed Requirements
Chapter 4	~~Prescriptive compliance method~~	**Chapter 4**	Accessibility
Chapter 5	~~Classification of work~~	**Chapter 5**	Repairs
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Chapter 14	~~Performance compliance methods~~	**Chapter 14**	Compliance alternative – Change of occupancy
Chapter 17	Retrofit requirements	**Chapter 11**	Retrofit requirements

Throughout the 2015 VECC

2012 VRC		2015 VEBC	
Section	**Text**	**Section**	**Text**
Throughout	Numerous references to the IFC		Deleted nearly all references to the International Fire Code
Throughout	Numerous provisions requiring remedies to unsafe and/or dangerous conditions		Deleted all references to "dangerous" and "unsafe" provisions
Throughout	Numerous provisions that were "subject to approval by the building official"		Deleted references where "subject to the approval of the building official" was in conflict with VCC Chapter 1 administrative provisions

Classification of Work

2012 VRC		2015 VEBC	
Section	**Text**	**Section**	**Text**
501.1	Scope. The provisions of this chapter shall be used in conjunction with Chapters 6 through 13 and shall apply to the alteration, repair, addition and change of occupancy of existing structures, including historic and moved structures, as referenced in Section 301.1.2. The work performed on an existing building shall be classified in accordance with this chapter.	**103.10**	Construction documents. Construction documents shall be submitted with the application for a permit. The work proposed to be performed on an existing building or structure, shall be classified on the construction documents as repairs, alterations, change of occupancy, addition, historic building, and/or moved building. All work areas shall be identified on the construction documents. Alterations shall further be identified as Level 1, Level 2, and/or Level 3. Exception: Construction documents or classification of the work does not need to be submitted when the building official determines the proposed work does not require such documents, classification, or identification.
501.2	The work area, as defined in Chapter 2, shall be identified on the construction documents.		

Definitions: Existing Building

2012 VRC		2015 VEBC	
Section	**Text**	**Section**	**Text**
202	EXISTING BUILDING. A building for which a legal certificate of occupancy has been issued under any edition of the USBC, and that has been occupied for its intended use; or, a building built prior to the initial edition of the USBC.	**202**	EXISTING BUILDING. A building for which a legal certificate of occupancy has been issued under any edition of the USBC or approved by the building official when no legal certificate of occupancy exists, and that has been occupied for its intended use; or, a building built prior to the initial edition of the USBC.

Definitions: Change of Occupancy

2012 VRC		2015 VEBC	
Section	**Text**	**Section**	**Text**
202	CHANGE OF OCCUPANCY. A change in the purpose or level of activity within a building that involves a change in application of the requirements of this code.	**202**	CHANGE OF OCCUPANCY. Either of the following shall be considered a change of occupancy where the current VCC requires a greater degree of accessibility, structural strength, fire protection, means of egress, ventilation or sanitation than is existing in the current building or structure: 1. Any change in the occupancy classification of a building or structure. 2. Any change in the purpose of, or a change in the level of activity within, a building or structure. NOTE: The use and occupancy classification of a building or structure, shall be determined in accordance with Chapter 3 of the VCC.

Definitions: Repair; and Work Area 

2012 VRC		2015 VEBC	
Section	**Text**	**Section**	**Text**
202	REPAIR. The restoration to good or sound condition of any part of an existing building for the purpose of its maintenance.	**202**	REPAIR. The reconstruction or renewal of any part of an existing building for the purpose of its maintenance or to correct damage.
202	WORK AREA. That portion or portions of a building consisting of all ~~reconfigured spaces~~ as indicated on the construction documents. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed and portions of the building where work not initially intended by the owner is specifically required by this code.	**202**	WORK AREA. That intended room, space, or portion of a building or structure where a wall or walls are added, relocated, or removed. Work area excludes (i) the addition or elimination of any door or window; (ii) the reconfiguration or extension of any system; (iii) the installation of any additional equipment; (iv) the removal of finished flooring or ceiling materials; (v) adjacent rooms or other rooms, spaces or portions of the building or structure where incidental work entailed by the intended work must be performed; and, (vi) portions of the building or structure where work not initially intended is specifically required by this code.

Special Requirements 

2012 VRC		2015 VEBC	
Section	**Text**	**Section**	**Text**
401.1 **602** **702** **803** **903** **1003**	Building materials and systems	**302**	Building materials and systems
405 **805.3.1.2**	Fire escapes (Level 2 Alterations)	**303**	Fire escapes
406 **602.3**	Glass replacement	**304**	Glass replacement and replacement windows
NA	N/A	**306**	Group B teaching and research laboratories
706.3	Addition or replacement of roofing	**307**	Reroofing and roof repair
2015 VCC 1510	Reroofing		

Special Requirements: Deleted 

2012 VRC		2015 VEBC	
Section	**Text**	**Section**	**Text**
402.5 – Additions	Smoke alarms in existing portions of a building. Where an addition is made to a building or structure of a Group R or I-1 occupancy, the existing building shall be provided with smoke alarms in accordance with Section 1103.8 of the International Fire Code.	**Deleted**	
403.6 – Alterations	Smoke alarms. Individual sleeping units and individual dwelling units in Group R and I-1 occupancies shall be provided with smoke alarms in accordance with Section 1103.8 of the International Fire Code.	**Deleted**	
1104.1 - Additions	Smoke alarms in existing portions of a building. Where an addition is made to a building or structure of a Group R or I-1 occupancy, the existing building shall be provided with smoke alarms as required by Section 1103.8 of the International Fire Code or Section R314 of the International Residential Code as applicable.	**Deleted**	

Accessibility

2012 VRC		2015 VEBC	
Section	**Accessibility**	**Section**	**Accessibility**
410.4 1006 1012.8 1401.2.5	Change of occupancy	**402**	Change of occupancy
410.5 1105	Additions	**403**	Additions
410.6 410.7 410.8 705 806 906 1204 1401.2.5	Alterations	**404**	Alterations
410.9 1205.15	Historic Buildings	**405**	Historic Buildings

Accessibility: Alterations Affecting an Area Containing a Primary Function

2012 VRC		2015 VEBC	
Section	**Accessibility**	**Section**	**Accessibility**
410.7 **705.2**	Alterations affecting an area containing a primary function. Where an alteration affects the accessibility to a, or contains an area of, primary function, the route to the primary function area shall be accessible. The accessible route to the primary function area shall include toilet facilities or drinking fountains serving the area of primary function.	**404.3**	Alterations affecting an area containing a primary function. Where an alteration affects the accessibility to, or contains an area of primary function, the route to the primary function area shall be accessible. The accessible route to the primary function area shall include toilet facilities and drinking fountains that shall also be accessible to and useable by individuals with disabilities, serving the area of primary function.

Repairs 

2012 VRC		2015 VEBC	
Section	**Repairs**	**Section**	**Repairs**
Section 404	Prescriptive compliance method	**Chapter 5**	Repairs
Chapter 6	Work Area compliance method		
Section 1401.2.4	Performance compliance method		
NA	NA	**501.1**	Exception: Repairs complying with the requirements of the building code under which the building or structure or the affected portions thereof was built, or as previously approved by the building official, shall be considered in compliance with the provisions of this code, unless the building or structure or the affected portions thereof is undergoing a substantial structural alteration as described in Section 604.7.1. New structural members added as part of the alteration or repairs shall comply with the VCC. Repairs of existing buildings in flood hazard areas shall comply with Section 503.

Alterations 

2012 VRC		2015 VEBC	
Section	**Alterations**	**Section**	**Alterations**
Chapter 7	Level 1 alterations	**602**	Level 1 alterations
Chapter 8	Level 2 alterations	**603**	Level 2 alterations
Chapter 9	Level 3 alterations	**604**	Level 3 alterations

Alterations Level 1: Roofs

2012 VRC		2015 VEBC	
Section	**Alterations Level 1**	**Section**	**Text**
706.3	Additional requirements for reroof permits. The requirements of this section shall apply to alteration work requiring reroof permits.	**Deleted**	
706.3.1	Bracing for unreinforced masonry bearing wall parapets		
706.3.2	Roof diaphragms resisting wind loads in high-wind regions		

Change of Occupancy

2012 VRC		2015 VEBC	
Section	**Change of Occupancy**	**Section**	**Change of Occupancy**
407	Prescriptive compliance method	**Chapter 7**	Change of occupancy
Chapter 10	Work Area compliance method		
1401.2.1 **1401.2.2**	Performance compliance method	**701.1**	Exception: Compliance with the provisions of Chapter 14 shall be permitted in lieu of complying with this chapter for a change of occupancy.

Change of Occupancy: Scope

2012 VRC		2015 VEBC	
Section	**Change of Occupancy**	**Section**	**Change of Occupancy**
1001.2	Change in occupancy with no change of occupancy classification.	**701.1**	Scope. The provisions of this chapter shall apply where a change of occupancy occurs, except as modified by Section 906 for historic buildings. Compliance with the current VCC for the change of occupancy shall only be required as prescribed in this chapter. Compliance shall be only as necessary to meet the specific provisions of the applicable International Codes and is not intended to require the entire building be brought into compliance.
1001.2.1	Repair and alteration with no change of occupancy classification.		
1001.3	Change of occupancy classification.		
1001.3.1	Partial change of occupancy classification.		

Change of Occupancy: Work Undertaken in Connection With a Change of Occupancy

2012 VRC		2015 VEBC	
Section	**Change of Occupancy**	**Section**	**Change of Occupancy**
1012.1.1	Compliance with Chapter 9	**701.2**	Work undertaken in connection with a change of occupancy. Any repairs, alterations, or additions undertaken in connection with a change of occupancy shall conform to the applicable requirements for the work as classified in this code and as modified by this chapter
1012.1.1.1	Change of occupancy classification without separation		
1012.1.1.2	Change of occupancy classification with separation		

Change of Occupancy: Increased Plumbing Fixtures

2012 VRC		2015 VEBC	
Section	**Change of Occupancy**	**Section**	**Change of Occupancy**
NA	NA	**710.1, Exception**	Exception: In other than Group R or I occupancies or child care facilities classified as group E, where the occupant load is increased by 20 percent or less in the area where the change of occupancy occurs, additional plumbing fixtures required based on the increased occupant load in quantities specified in the International Plumbing Code.

Additions

2012 VRC		2015 VEBC	
Section	**Additions**	**Section**	**Additions**
402 **Chapter 11** **1401.2.3**	Prescriptive compliance method Work Area compliance method Performance compliance method	**Chapter 8**	Additions

Historic Buildings

2012 VRC		2015 VEBC	
Section	**Historic Buildings**	**Section**	**Historic Buildings**
408 **Chapter 12** **1401.1**	Prescriptive compliance method Work Area compliance method Performance compliance method	**Chapter 9**	Historic Buildings

Moved Buildings or Structures

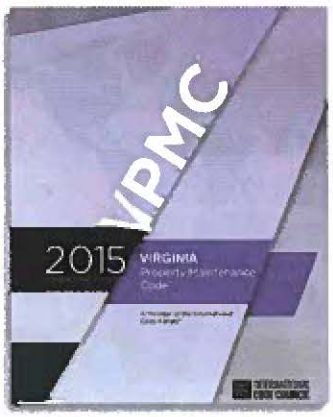
2012 VRC		2015 VEBC	
Section	**~~Relocated or~~ Moved Buildings**	**Section**	**Moved Buildings or Structures**
408	Prescriptive compliance method	**Chapter 10**	Moved buildings or structures
Chapter 13	Work Area compliance method		
1401.1	Performance compliance method		

Change of Occupancy Compliance Alternative

2012 VRC		2015 VEBC	
Section	**Performance Compliance Method**	**Section**	**Compliance Alternative - COO**
1401.1	Scope. The provisions of this chapter shall apply to the alteration, repair, addition and change of occupancy of existing structures, including historic and moved structures, as referenced in Section 301.1.3. The provisions of this chapter are intended to maintain or increase the current degree of public safety, health and general welfare in existing buildings while permitting repair, alteration, addition and change of occupancy without requiring full compliance with Chapters 5 through 13, except where compliance with other provisions of this code is specifically required in this chapter.	**1401.1**	Scope. The provisions of this chapter are intended to maintain or increase the current degree of public safety, health and general welfare in existing buildings or structures, <u>while permitting changes of occupancy without requiring full compliance with Chapter 7</u>, except where compliance with other provisions of this code is specifically required in this chapter. Exception: The provisions of this chapter shall not apply to buildings with occupancies in Group H or I. <u>Additions – comply with VCC</u> <u>Repairs and alterations – comply with Chapters 6 through 9</u>

2015 Virginia Property Maintenance Code

- ❑ 104.5.4.3 Notice of Violation for Manufactured Homes
- ❑ 105 New Violations Section
- ❑ 106.7 Local Board of Building Code Appeals
- ❑ 202 Definitions
  - Applicable Building Code
  - Maintained
  - Cost of Such Demolition or Emergency Repairs
  - Historic Building
- ❑ 505.5 Nonpotable Water Reuse Systems
- ❑ 603.1 Equipment
- ❑ 604.3.2.1 Electrical equipment
- ❑ 606.1 Elevators, Escalators, and Dumbwaiters



Note on unenforceable language

Unenforceable language has been removed throughout the 2015 Virginia Maintenance Code

104.5.4.3 Notice of Violation for Manufactured Home Park

- New Code Section
- When providing a Notice of Violation to a manufactured home park owner **that jeopardizes the health or safety of tenants of the park**, a copy of the notice shall be provided to each affected tenant.

105 – New Violations Section

New code section incorporates components from section 104 and includes new language to help localities enforce and gain compliance on property maintenance related violations

103.2.2 Responsibility.

The owner of a structure shall provide and maintain all buildings, structures, systems, facilities and associated equipment in compliance with this code unless it is specifically expressed or implied that it is the responsibility of the tenant or occupant.

105.1 Violation a misdemeanor; civil penalty.
In accordance with Section 36-106 of the Code of Virginia, it shall be unlawful for any owner or any other person, firm or corporation, on or after the effective date of any code provisions, to violate any such provisions. Any locality may adopt an ordinance that establishes a uniform schedule of civil penalties for violations of specified provisions of the code that are not abated or remedied promptly after receipt of a notice of violation from the local enforcement officer.

Note: See the full text of Section 36-106 of the Code of Virginia for additional requirements and criteria pertaining to legal action relative to violations of the code.

105.2 Notices, reports and orders.

- Unchanged from previous section 104.5.4

105.3 Correction notice.

- Unchanged from previous section 104.5.1.1

~~104.5.4.2~~ 105.4 Notice of violation.
If the code official determines there are violations of this code ~~other than those for unsafe structures, unsafe equipment or structures unfit for human occupancy under Section 105,the code official may issue~~ a written notice of violation may be issued ~~to be communicated promptly in writing~~ to the owner or the person responsible for the maintenance or use of the building or structure in lieu of a correction notice as provided for in Section ~~104.5.4.1~~ 105.3. In addition, the code official shall issue a notice of violation for any uncorrected violation remaining from a correction notice established in Section ~~104.5.4.1~~ 105.3. ~~A notice of violation shall be issued by the code official before initiating legal proceedings unless the conditions violate the unsafe building conditions of Section 105 and the provisions established therein are followed.~~ The code official shall provide the section numbers to the owner for any code provision cited in the notice of violation. The notice shall require correction of the violation or violations within a reasonable time ~~unless an emergency condition exists as provided under the building provisions of Section 105~~. The owner or person to whom the notice of violation has been issued shall be responsible for contacting the code official within the time frame established for any re-inspections to assure the violations have been corrected. The code official will be responsible for making such inspection and verifying the violations have been corrected. In addition, the notice of violation shall indicate the right of appeal by referencing the appeals section of this code.

(105.4) Exceptions:

1. Notices issued, and legal proceedings or emergency actions taken, under Section 106 for unsafe structures, unsafe equipment or structures unfit for human occupancy.
2. Notices issued for failing to maintain buildings and structures as required by Section 103.2, as evidenced by multiple or repeated violations on the same property, are not required to include a compliance deadline for correcting defects.

105.5 Coordination of inspections.

Unchanged from previous 104.5.5

105.6 Further action when violation not corrected. 

If the responsible party has not complied with the notice of violation, the code official may request the legal counsel of the locality to institute the appropriate legal proceedings to restrain, correct or abate the violation or to require the removal or termination of the use of the building or structure involved. In cases where the locality or legal counsel so authorizes, the code official may issue or obtain a summons or warrant.

- Explanation: The existing section regarding "further action when a violation not corrected" was moved from section 104 to the new violations section "section 105" and the requirement for the code official to submit a "written" request to legal counsel was changed to "may request"....

105.6.1 Further action for corrected violations. 

Compliance with a notice of violation notwithstanding, the code official may request legal proceedings be instituted for prosecution when a responsible party is served with three or more separate notices of violation for the same property within any five consecutive years. Legal proceedings shall not be instituted under this section for violation notices issued pursuant to the initial inspection of the property. Legal proceedings for violations that have been abated in residential rental dwelling units within a multifamily apartment development may only be instituted for such violations that affect safe, decent or sanitary living conditions.
Exception: Legal proceedings shall not be instituted for violations that have been abated on owner-occupied single family dwellings.

- Explanation: This new subsection allows a code official to initiate legal proceedings in certain circumstances even if the violations have already been corrected. It was developed primarily to address habitual offenders that neglected to do any maintenance on their buildings until after a tenant made a complaint and a NOV (notice of violation) was issued, but always made the corrections just before the required deadline. This new section allows a code official to take an owner to court if there are 3 or more violations on the same property within a 5 year window, even if the violations have been abated. This provision does not apply to single family dwellings and only applies to violations affecting safe and sanitary conditions in multifamily buildings.

105.7 Penalties and abatement.

- Unchanged from previous 104.5.7

107.7 Local Board of Building Code Appeals 

- Existing code section updated to remove "resolution" and replace with "written decision". This change clarifies that the decision of the LBCCA is not restricted to a formal format of a resolution and that a letter would be sufficient.

202 Definitions

202 Applicable Building Code 

The local or statewide building code and referenced standards in effect at the time the building or portion thereof was constructed, altered, renovated or underwent a change of occupancy. See Section 103 for the application of the code

Maintained

To keep unimpaired in an appropriate condition, operation, and continuance as installed in accordance with the applicable building code, or as previously approved, and in accordance with the applicable operational and maintenance provisions of this code.

Cost of Such Demolition or Emergency Repairs (International Change)

The costs shall include the actual costs of the demolition or repair of the structure less revenues obtained if salvage was conducted prior to demolition or repair. Costs shall include, but not be limited to...(see code book for full definition)

Historic Building (International Change)

Any building or structure that is **one or more** of the following:

1. Listed or certified as eligible for listing, by the State Historic Preservation Officer or the Keeper of the National Register of Historic Places, in the National Register of Historic Places.
2. Designated as historic under an applicable state or local law.
3. Certified as a contributing resource within a National Register or state or locally designated historic district.

505.5 Nonpotable Water Reuse Systems

Where installed, nonpotable water reuse and rainwater collection and conveyance systems shall be maintained in a safe and sanitary condition.

Where such systems are not properly maintained, the systems shall be repaired to provide for safe and sanitary conditions, or the system shall be abandoned in accordance with the following:

1. All system piping connecting to a utility-provided or private water system shall be removed or disabled. Proper cross-connection control and backflow prevention measures shall comply with the applicable building code.
2. Where required, the distribution piping system shall be replaced with an approved potable water supply piping system.
3. The storage tank shall be secured from accidental access by sealing or locking tank inlets and access points, or filling with sand or equivalent.

603.1 Equipment

- Adds "equipment" to list of Mechanical maintenance requirements
- Section 603.1 (2012)... adequately covers all mechanical appliances, but not the associated fuel conveyance piping, fuel gas systems, fuel oil storage, hangers, supports, etc. By adding "equipment" it clarifies that items associated with mechanical equipment are also covered by the code.

604.3.2.1 Electrical equipment

- Expands who can certify an electrical system that has been exposed to fire. (Underline/strikeout showing changes to this section)

604.3.2.1 Electrical equipment.

Electrical switches, receptacles and fixtures, including furnace, water heating, security system and power distribution circuits, that have been exposed to fire, shall be replaced in accordance with the provisions of the ~~*International Building Code*~~ Virginia Construction Code.

Exception:

Electrical switches, receptacles and fixtures that shall be allowed to be repaired or reused where an inspection report from the equipment manufacturer or an *approved* ~~manufacturer's~~ representative of the equipment manufacturer, a third party licensed or certified electrician, or an electrical engineer indicates that the equipment has not sustained damage that requires replacement.

606.1 Elevators, Escalators, and Dumbwaiters

- Clarifies that if not posted in the elevator or attached to the escalator or dumbwaiter, a notice must be present to notify users of where this certificate can be viewed.

2015 USBC Elevator Provisions and Related Codes

❑ USBC 102.3 (5)	❑ VCC 3006
❑ VCC 3001.2	❑ VECC C405.9.1
❑ VCC 3002.9	❑ VECC C405.9.2
❑ VCC 3004	❑ VECC C405.9.2.1
❑ VCC 3005	❑ VMC 606.1

USBC 102.3 (5)

- Clarification that conveyors used exclusively to transport packages, products or materials are exempt from code.
- Such conveyors are considered to be manufacturing and processing equipment not within the scope of the USBC

VCC 3001.2 Referenced Standards

- New standard reference for design, approval and inspection of scissor lifts ANSI MH 29.1

VCC 3002.9 Plumbing and Mechanical Systems

- Relocated requirements prohibiting plumbing and mechanical systems in elevator hoistways

VCC 3004 Conveying Systems

- Elevator hoistway venting requirements are deleted and replaced with new 3004, Conveying Systems

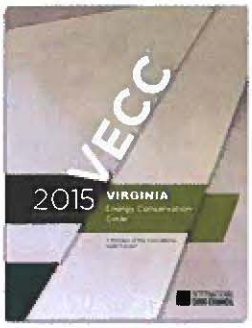
VCC 3005 Machine Rooms

- Expanded to include 'machine rooms, machine spaces, control rooms, control spaces' to address Machine-Room-Less (MRL) systems

VCC 3006 Elevator Lobbies and Hoistway Opening Protection

- Deleted by Virginia in entirety

VECC C405.9.1 Elevator Cabs



- New efficiency requirements for luminaires in cab, not including signals and displays; and for ventilation fans in elevators w/o air conditioning
- Controls to be provided that de-energize fans, luminaires when cab is stopped, unoccupied with doors closed for > 15 min

VECC C405.9.2 Escalators and Moving Walks

- Such equipment shall have automatic controls configured to reduce speed to the minimum permitted by A17.1 when not conveying passengers

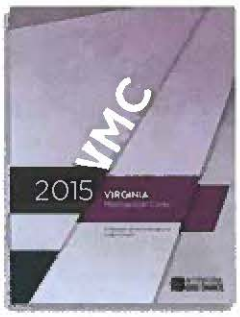
VECC C405.9.2.1 Regenerative Drive

- Requires regenerative drive on escalators designed for one-way down or reversible operation, when the escalator is loaded with passengers totaling 750 lbs or more
- NFPA 70/NEC article 705 applies

VMC 606.1 General (elevators, escalators, and dumbwaiters)

- Updated location for certificate of inspection
- Where certificate of inspection is not displayed in/on equipment as applicable, the location of certificate shall be displayed instead

2015 Virginia Mechanical and Fuel Gas Codes



- ❑ New Definition - Pollution Control Unit
- ❑ 304.11
- ❑ 307.3
- ❑ 502.20
- ❑ 504.5/M1502.4.4
- ❑ 505.3
- ❑ 506.5.2
- ❑ 507.1
- ❑ 507.1.1.1
- ❑ 508.1.2
- ❑ 510.4, 510.5
- ❑ 607.6.2.2
- ❑ 701.2
- ❑ 802.9/M1804.4
- ❑ 903.4
- ❑ 918.5 & 918.6
- ❑ 1102.3
- ❑ 1210 / M2105
- ❑ M1305.1.3.1
- ❑ M1306.2.1
- ❑ M1308.2

New Definition - Pollution Control Unit

Manufactured equipment that is installed in a grease exhaust duct system for the purpose of extracting smoke, grease particles, and odors from the exhaust flow by means of a series of filters.

304.11 Fall-Arresting Restraint Systems

Change Type: Modification/Exception

- The modification removes specific pieces of systems and now states "various components. "
- The exception now allows for non-permanent restraints systems to be allowed that meet ANSI/ASSE Z 359.1 requirements.

307.3 Condensate Pumps in Uninhabitable Spaces

Change Type: Addition

307.3 Condensate Pumps. Condensate pumps located in uninhabitable spaces, such as attics and crawl spaces, shall be connected to the appliance or equipment served such that when the pump fails, the appliance or equipment will be prevented from operating. Pumps shall be installed in accordance with the manufacturer's instructions.

502.20 Manicure and Pedicure Stations

Change Type: Addition

502.20 Manicure and Pedicure Stations. Manicure and pedicure stations shall be provided with an exhaust system in accordance with Table 403.3.1.1, Note h. Manicure tables and pedicure stations not provided with factory-installed exhaust inlets shall be provided with exhaust inlets located not more than 12 inches (305 mm) horizontally and vertically from the point of chemical application.

504.5/M1502.4.4 Dryer Duct Power Ventilators

Change Type: Addition

504.5 Dryer Exhaust Duct Power Ventilators. Domestic dryer exhaust duct power ventilators shall be listed and labeled to UL 705 for use in dryer exhaust duct systems. The dryer exhaust duct power ventilator shall be installed in accordance with the manufacturer's instructions

504.8.4.3 Dryer exhaust duct power ventilator length.
The maximum length of the exhaust duct shall be determined by the dryer exhaust duct power ventilator manufacturer's installation instructions.

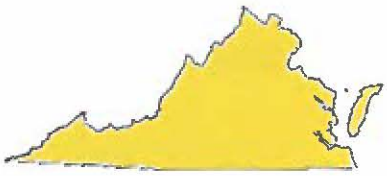
505.3 Domestic Kitchen Exhaust Systems in Multistory Buildings

Change Type: Addition

Change Summary: New Section now allows for a single shaft for multiple domestic hood exhaust systems in a multiple story building. No longer requiring separate exhaust outlets, BUT with twelve (12) specific requirements that ALL need to be met.

505.3 (NEW) Common Exhaust Systems for Domestic Kitchens Located in Multistory Structures. Where a common multistory duct system is designed and installed to convey exhaust from multiple domestic kitchen exhaust systems, the construction of the system shall be in accordance with all of the following: (see code book for complete list of 12 requirements)

506.5.2 Pollution Control Unit

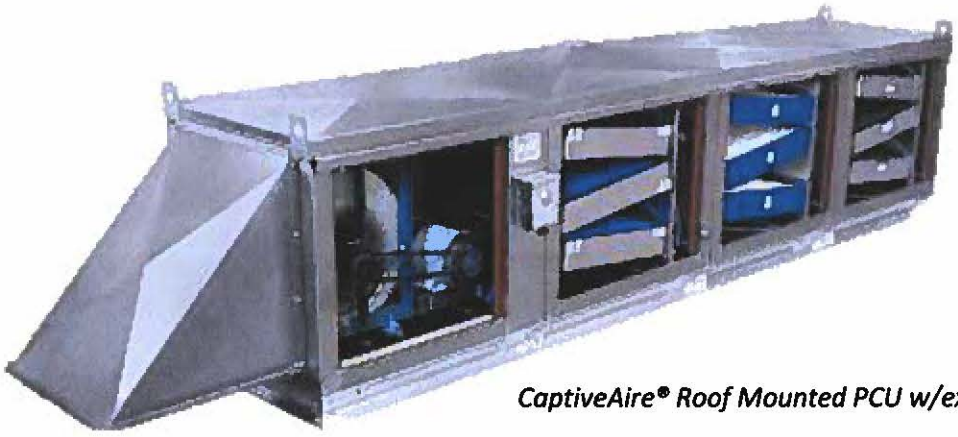


Change Type: Addition – VA Amendment

New section specifies that **if installed**, these units be installed per the manufacturer's installation instructions and ALL of the new 15 specific requirements.

Summary of new sections/requirements: (see code for complete details)

1. UL 1978
2. Fans UL 762
3. Mounted and secured per MII (Manufacturer's Installation Instructions) and IBC
4. Indoor use listed and labeled for such, in a room with same fire rating as duct enclosure, accessible for cleaning/service, space ventilated according to MII
5. 18" clearance between unit and combustible materials
6. Roof mounted listed for such and not less than 18" above the roof
7. Exhaust outlets per Section 506.3.13
8. Airflow pressure control with visual alarm where cooking operations occur
9. Factory installed fire suppression
10. Service space per MII and Section 306
11. Wash down drain and trap requirements
12. Protection from freezing
13. Duct connections per 506.3.2.3 and slope for water splash
14. Extra heavy duty appliance can't be connected unless unit specifically designed for and rated for solid fuels
15. Maintained in accordance with MII



CaptiveAire® Roof Mounted PCU w/exhaust fan

507.1 Type 1 Hood Installation

Change Type: Modification

Summary: New language added to require that if a Type 1 hood is installed, even if a Type 2 is all that is required, full compliance with the Type 1 requirements shall be met. This includes the requirements of 506, 507, 508 and 509.

507.1.1.1 Heat Sensors for Multiple Commercial Kitchen Hoods

Change Type: Addition

Summary: The addition now makes it mandatory when Type 1 hoods share a single exhaust system, each hood is required to have its own temperature or radiant energy sensor installed and accessible from a hood outlet or cleanout location.

508.1.2 Air Balance for Commercial Kitchen Ventilation Systems

Change Type: Addition

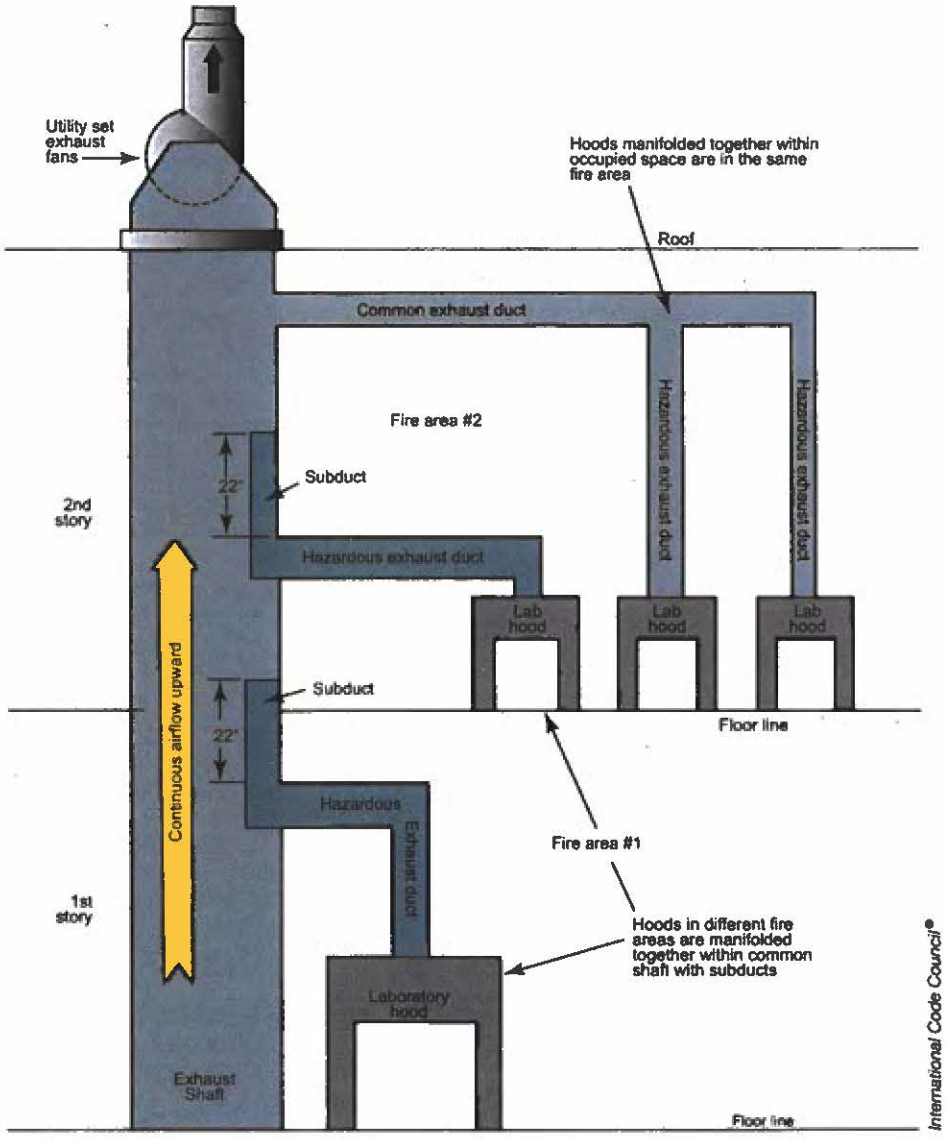
Summary: Air balancing is now required to be demonstrated at the time of plan review through a schedule or diagram indicating the design of outdoor air balance.

510.4, 510.5 Hazardous Exhaust Systems

Change Type: Modification

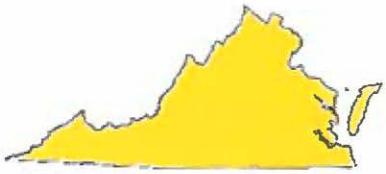
Summary:

- Text in previous editions of the code that alluded to the recirculation of hazardous exhaust has been deleted.
- The previous exception was too broad in application, so the entire section has been formatted to clarify the scope of the exception.
- Previous item 7 has been revised to prescribe the method for maintaining continuous negative pressure.



Laboratory exhaust systems manifolded together in a common shaft

607.6.2.2 Ceiling Radiation Dampers



Change Type: New VA Amendment

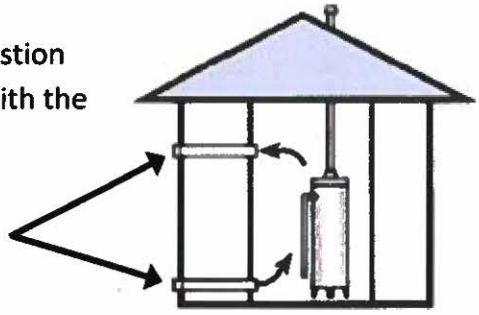
607.6.2.2 Equipment shutdown. Where ceiling radiation dampers are listed as static dampers, the HVAC equipment shall be effectively shut down to stop the airflow prior to the damper closing using **one** of the following methods:

1. A duct detector installed in the return duct.
2. An area smoke detector interlocked with the HVAC equipment.
3. A listed heat sensor installed in the return duct

701.2 Dampered Openings

Change Type: Addition

Summary: Where dampers are installed on combustion air openings, the code now requires an interlock with the appliance to prevent operation.



Dampers interlocked with operation of the appliances

802.9/M1804.4 Door Clearance to Vent Terminals

Change Type: Addition

Summary: Doors are not permitted to swing within 12 inches of an appliance vent terminal.

802.9 Door swing. Appliance and equipment vent terminals shall be located such that doors cannot swing within 12 inches (305 mm) horizontally of the vent terminal. Door stops or closers shall not be installed to obtain this clearance.

903.4 Gasketed Fireplace Doors

Change Type: Addition

Summary: Gasketed (sealed) doors are prohibited on factory-built fireplaces except where the fireplaces are listed for use with such doors.

918.5 & 918.6 Outdoor and Return Air Openings

918.5 Outdoor and return air openings. Outdoor intake openings shall be located in accordance with Section 401.4. Return air openings shall be located in accordance with Section 601.5.

918.6 Outdoor opening protection. Outdoor air intake openings shall be protected in accordance with Section 401.5

Significance: The 2012 code listed the requirements for outdoor and return air openings and outdoor opening protection that are already outlined in other sections of the code. This simplifies these code sections by referring to other appropriate code sections

1102.3 Access Port Protection / 1101.10 Locking Caps Exception

Change Type: Addition

Summary: The requirement for making refrigerant access ports tamper resistant has been expanded to apply to existing systems when service involves adding or removing refrigerant

A New Exception (in 1101.10) states that locking access ports are not required on equipment installed in controlled areas such as roofs with locked access hatches or doors.

1210 / M2105 Plastic Pipe Ground-Source Heat Pump Loop Systems

Change Type: New section added

Summary: An entirely new section has been added to address installation of these systems, sometimes referred to as "geo-exchange, earth-coupled, ground source, or water source heat pumps"

M1305.1.3.1 Electrical Requirements for Appliances in Attics

Change Type: Modification

Summary: Required lamps are now required to be protected.

M1305.1.3.1 A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be installed at or near the appliance location in accordance with Chapter 39. Exposed lamps shall be protected from damage by location or lamp guards.

- Note a similar requirement has been added for crawlspaces in section 1305.1.4.3

M1306.2.1 Labeled Assemblies

Change Type: Addition

Summary: Allowed to be least restrictive

M1306.2.1 Labeled assemblies. The allowable clearance shall be based on an approved reduced clearance protective assembly that is listed and labeled in accordance with UL 1618.

M1308.2 Protection against Physical Damage

Change Type: Modification

Change Summary: This section has been expanded and reorganized to provide additional details and requirements for pipe protection.

New requirements require pipe be protected for the width and length of the piping in certain situations.

M1308.2 Protection against physical damage. Where piping will be concealed within light-frame construction assemblies, the piping shall be protected against penetration by fasteners in accordance with Sections M1308.2.1 through M1308.2.3.

Exception: Cast iron piping and galvanized steel piping shall not be required to be protected.

Requirements now grouped into 3 sections:

- M1308.2.1 Piping through bored holes or notches.
- M1308.2.2 Piping in other locations.
- M1308.2.3 Shield plates.

310.1 / G2411.1.1 CSST

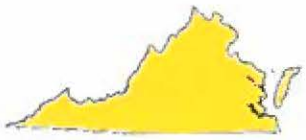
CHANGE TYPE: Addition/Reorganization of existing section w/State Amendments

This section has been reorganized and broken out into 5 separate sections for clarity **AND State Amendments will modify requirements for CSST with arc resistant jackets/coatings**

310.1 Pipe and Tubing

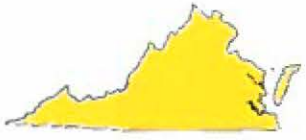
- **310.1.1.1 Point of connection**
- **310.1.1.2 Size and material of jumper**
- **310.1.1.3 Bonding jumper length**
- **310.1.1.4 Bonding connections**
- **310.1.1.5 Connection devices**

310.1 Pipe and tubing



Each aboveground portion of a gas piping system that is likely to become energized shall be electrically continuous and bonded to an effective ground-fault current path. Gas piping shall be considered to be bonded where it is connected to appliances that are connected to the equipment grounding conductor of the circuit supplying that appliance. Corrugated Stainless steel tubing (CSST) piping systems listed with an arc resistant jacket or coating system in accordance with ANSI LC-1 shall comply with this section. Where any CSST segments of a piping system are not listed with an arc resistant jacket or coating system in accordance with ANSI LC-1, Section 310.1.1 shall apply.

310.1.1 CSST without arc resistant jacket or coating system



Gas piping systems and piping systems containing one or more segments of CSST not listed with an arc resistant jacket or coating system in accordance with ANSI LC-1 shall be bonded to the electrical service grounding electrode system or, where provided, the lightning protection grounding electrode system and shall comply with Sections 310.1.1.1 through 310.1.1.5.

310.1.1.1 Point of connection.

The bonding jumper shall connect to a metallic pipe, pipe fitting or CSST fitting.

310.1.1.2 Size and material of jumper.

The bonding jumper shall be not smaller than 6 AWG copper wire or equivalent

310.1.1.3 Bonding jumper length.

The length of the bonding jumper between the connection to a gas piping system and the connection to a grounding electrode system shall not exceed 75 feet (22,860 mm). Any additional grounding electrodes used shall be bonded to the electrical service grounding electrode system or, where provided, the lightning protection grounding electrode system.

310.1.1.4 Bonding connections.

Bonding connections shall be in accordance with NFPA 70.

310.1.1.5 Connection devices.

Devices used for making the bonding connections shall be listed for the application in accordance with UL 467.

403.6 Plastic Pipe, Tubing, and Fittings

CHANGE TYPE: New verbiage added.

Polyvinyl chloride (PVC) and chlorinated polyvinyl chloride (CPVC) plastic pipe, tubing and fittings **shall not be used** to supply fuel gas.

404.5 Fittings in Concealed Locations

Change Type: Clarification/Reorganization

Change Summary: Rather than listing what is prohibited and having exceptions, it states what is allowed.

404.5 Fittings in concealed locations. Fittings installed in concealed locations shall be limited to the following types:

1. Threaded elbows, tees and couplings.
2. Brazed fittings.
3. Welded fittings.
4. Fittings listed to ANSI LC-1/CSA 6.26 or ANSI LC-4

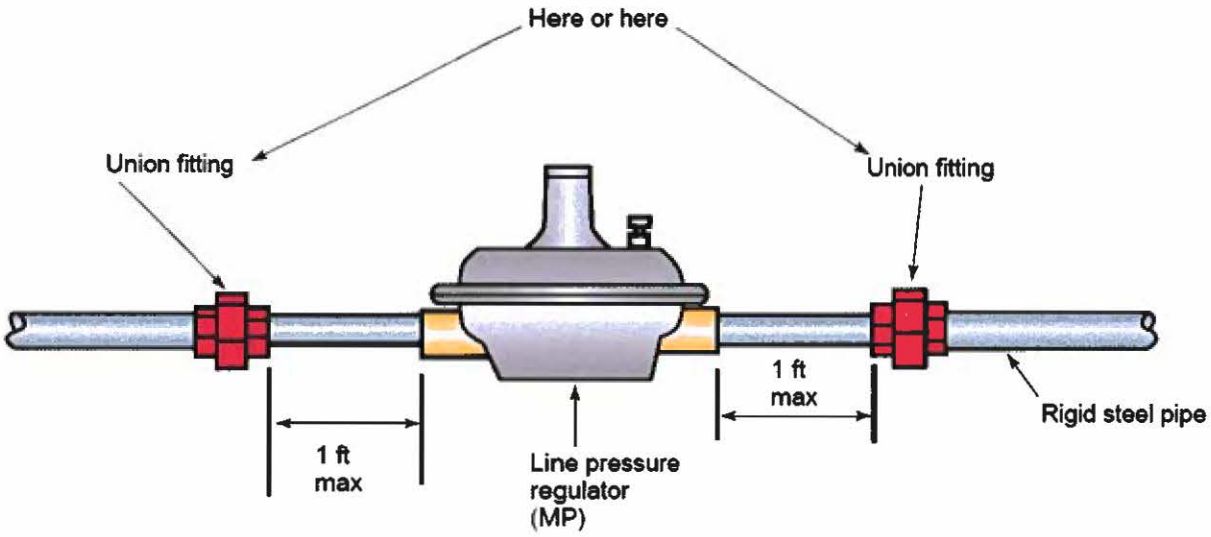
410.2 / G2421.2.7 Medium Pressure Regulators

Change Type: Modification – New item #7 added to requirements

Change Summary: Line regulators installed in rigid piping must have a union installed to allow removal of the regulator.

New Item #7:

7. Where connected to rigid piping, a union shall be installed within 1 foot of either side of the MP regulator.



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503.4.1 / G2427.4.1 Plastic Piping

Change Type: Modification

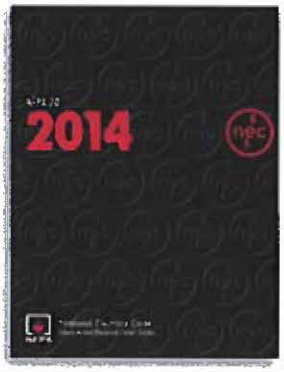
2012 Code: "Plastic piping used for venting appliances listed for use with such venting materials shall be approved".

Under the 2012, it was implied that the Code Official must approve the use of plastic venting. This is now the responsibility of the manufacturer.

2015 Code – 503.4.1 Plastic Piping

Where plastic piping is used to vent an appliance, the appliance shall be listed for use with such venting materials and the appliance manufacturer's installation instructions shall identify the specific plastic piping material.

2015 Virginia Electrical Code (2014 NEC)



- ❑ NEC Code Wide Change
- ❑ NEC Art. 100 Definitions
- ❑ NEC 110.16
- ❑ NEC 110.21(B)
- ❑ NEC Code Wide Chang
- ❑ NEC 110.26 E(2)(a)&(b)
- ❑ Outdoor Dedicated Space
- ❑ NEC 200.4(B)
- ❑ NEC 210.8(A)(7) & IRC E3902.7
- ❑ NEC 210.8(A)(9)& IRC E3902.8
- ❑ NEC 210.8 (A)(10)& IRC E3902.9
- ❑ NEC 210.8(B)(8)
- ❑ NEC Art. 210.8 (D)
- ❑ NEC 210.12 & IRC E3902.16
- ❑ NEC 210.12(C)
- ❑ NEC 210.13
- ❑ NEC 210.17 & IRC E3702.13
- ❑ NEC 210.52(E) 1,2,3 & E3901.7
- ❑ NEC 210.52 (G)(1) & IRC E3901.9
- ❑ NEC 210.64
- ❑ NEC 220.12
- ❑ NEC 240.21(B)(1) Exception
- ❑ NEC 250.64 (B)
- ❑ NEC 250.66 (A) & (B)
- ❑ NEC 250.68 (C)
- ❑ NEC 250.102(C)
- ❑ NEC 250.122 (B)
- ❑ NEC 300.22 (C)(1)
- ❑ NEC 300.38
- ❑ NEC 310.15(B)(7) & IRC E3603.1.1
- ❑ NEC 314.15
- ❑ NEC 393
- ❑ NEC 404.2 (C)& IRC E4001.15
- ❑ NEC 406.3 (E)
- ❑ NEC 406.5 (E)
- ❑ NEC 406.9(B)(1) & IRC E4002.9
- ❑ NEC 406.15 & IRC 4002.15
- ❑ NEC 408.4 (B)
- ❑ NEC 410.10 (F)
- ❑ NEC 422.5
- ❑ NEC 422
- ❑ NEC 422.49
- ❑ NEC 422.51 (B)
- ❑ NEC 424.66 (A)&(B)
- ❑ NEC 445
- ❑ NEC 450
- ❑ NEC 501.40
- ❑ NEC 516
- ❑ NEC 517.2
- ❑ NEC 517.18 (A)
- ❑ NEC 517.18 (B)
- ❑ NEC 517.19 (B)
- ❑ NEC 517.19 (C)
- ❑ NEC 517.30 (B)
- ❑ NEC 517.41 (E)
- ❑ NEC 600.6 (A) (1)
- ❑ NEC 646 New Article
- ❑ NEC 680.2 & IRC4201.2
- ❑ NEC 680.12
- ❑ NEC 680.21 (C)
- ❑ NEC 680.22 (A) (1)
- ❑ NEC 680.22 (B) (6) & IRC E4203.4.3
- ❑ NEC 680.42 (B)
- ❑ NEC New 700.8
- ❑ NEC 700.19
- ❑ NEC 728 New Article
- ❑ NEC 750 New Article

NEC Code Wide Change – Voltage Increase

- Increases voltage to 1000 volts from 600 volts
- Allows for higher voltage systems (PV, Wind)
- Check for properly listed cable or conductor

NEC Art. 100 Definitions – Coordination (Selective)

- Achieved by Selection and installation
- Includes full range of available currents, overload to maximum fault current, and full range of opening times based on associated currents.

NEC Art. 100 Definitions – Intersystem Bonding Termination

- New language adds "Intersystem"
- For bonding of communication systems only
- Cable, satellite, fiber optic etc.

NEC Art. 100 Definitions – Separately Derived System

- Complete rewrite to provide clarity
- Not a service but an electrical source
- Includes Transformers, UPS, Generators

NEC 110.16 – Arc Flash Hazard Warnings

- Added Switchgear to list of equipment requiring marking for Arc Flash Hazards.
- Can be field or factory applied
- Also must meet the requirements of 110.21(B).

NEC 110.21(B) - Field Applied Hazard Markings

1. Adequately warn of the hazard involved
2. Permanently Affixed
3. Sufficient durability for environment

NEC Code Wide Change – Lockable Disconnecting Means

Lockable Disconnecting Means 110.25

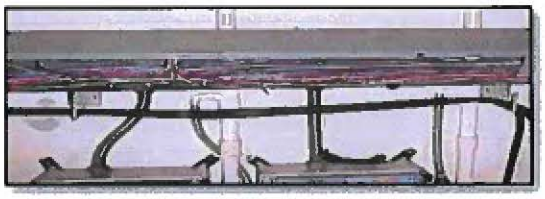
1. Capable of being locked in the open position.
2. Remain in place with or without lock installed.

NEC 110.26 E(2)(a)&(b) Outdoor Installations

Dedicated Equipment Space now required

- Depth and width of equipment from grade to a height of 6 foot above equipment.
- No piping or other equipment foreign to the electrical system can be located in that zone.

NEC 200.4(B) – Neutral Conductor Grouping In Enclosures



- Neutral conductor shall be grouped with its ungrounded circuit conductors.
- Not required for cable assemblies or where conductors pass through a box.
- "Grouped" can be marked, cable tied, or similar means for ready identification.

NEC 210.8(A)(7) & IRC E3902.7 – GFCI at Sinks

- Revised Language
- All receptacles within 6 feet of all sinks require GFCI Protection

NEC 210.8(A)(9)& IRC E3902.8 – GFCI Tubs and Showers

- Tubs and showers added under a new item #9
- Receptacles within 6 feet requires GFCI protection
- Measured from outside edge of tub or shower

NEC 210.8 (A)(10)& IRC E3902.9 – GFCI laundry Areas

Receptacles within Laundry Areas require GFCI protection.

NEC 210.8 (B)(8) – GFCI Garages

- Garages, Service, and Similar areas
- Other than showrooms and exhibition Halls

NEC Art. 210.8 (D) – Dishwashers

New GFCI requirement for Dishwashers in dwelling units only.

NEC 210.12 & IRC E3902.16 – AFCI Protection

1. AFCI protection is still required on all R-3 dwellings
2. Limited to bedrooms only in 1 and 2 family homes and townhomes under 4 stories per USBC
3. A listed supplemental arc protection circuit breaker. NM cable allowed but limited in length to 50 feet for 14 gauge and 70 feet for 12 gauge circuit conductors. First box is to be marked
4. A listed branch circuit AFCI installed at the first outlet box from the panel. Rules from #3 apply.
5. Metallic raceways and Type MC or steel armor type AC cable meeting the requirements of 250.118 with a listed Branch Arc Fault device installed at the first outlet. No length limitations.
6. Metal or nonmetallic raceways installed in a minimum 2" concrete and having a listed branch circuit Arc fault device installed at the first outlet.

NEC 210.12 (C) – AFCI Protection in Dormitories

Dormitory Units now require AFCI protection:

- Bedrooms
- Living rooms
- Hallways
- Closets
- Similar areas

NEC 210.13 – Ground Fault Protection of Equipment

- Required on branch circuits rated 1000 amps or more and over 150 volts phase to ground
- Follow same rules for services in 230.95

NEC 210.17 & IRC E3702.13 – Electric Vehicle Branch Circuit

- Separate branch circuit required

NEC 210.52 (E) 1, 2, 3 & E3901.7 – Outdoor Outlets

- Added language.
- Outlet must be readily accessible from grade.
- Not higher than 6 ½' above grade.

NEC 210.52 (G) (1) & IRC E3901.9 – Garage Receptacles

- Garage Receptacle(s) with separate circuit
- Serve no other outlets
- Receptacle outlet required in each car space

NEC 210.64 – Electrical Service Areas

- New requirement for a receptacle located within 50' of service equipment.
- Not required in 1 & 2 dwelling units.

NEC 220.12 – Lighting Loads

New Exception: Lighting Loads are based on tables in Energy Code based on Use of Building.

- Must have the following:
  - Power monitoring system.
  - Alert system shall notify owner when load values exceeds the design loads.
- Demand factors from 220.42 shall not apply.

NEC 240.21(B) (1) Exception – Minimum Conductor Size

Allows manufacturers of listed equipment to determine minimum conductor size based on ampacity.

NEC 250.64 (B) – Grounding Electrode

Burial depth of Grounding Electrode Conductor not required to meet table 300.5 requirements.

NEC 250.66 (A) & (B) – Electrode Conductor Sizing

Changed language for "Sole Connection" to clarify Code requirements.

NEC 250.68 (C)(3) – Grounding Electrode Connections

New Heading: Grounding Electrode Connections

- New #3 now allows an extension of the rebar to an accessible location above the concrete.

NEC 250.102(C) – Bonding Conductors and Jumpers

- New Table For Sizing Conductors
- Over 1100 Cu. & 1750 AL. then use 12.5% rule

NEC 250.122 (B) – Size of Equipment Grounding Conductors

- Increased in size proportionately with the increase in size of the ungrounded conductors

NEC 300.22 (C)(1) – Wiring Methods

- Type MI without an overall nonmetallic covering
- Cable ties in Plenums now must be listed as having low smoke and heat release properties

NEC 300.38 – Raceways in Wet Locations above Grade

- New section clarifies that the inside of a raceway located outdoors (or any wet location) is considered a wet location.
- Conductors and cables comply with 310.10(C).

NEC 310.15(B) (7) & IRC E3603.1.1 - Service Entrance Conductors and Main Feeder Sizing

- Table removed and prescriptive text (1)-(4) added for requirements.
- Service Entrance Conductors and Main Feeder to be sized based on an ampacity of 83% of the calculated service rating.

NEC 314.15 – Damp & Wet Locations

- Drainage opening permitted to be field applied
- Openings no greater than ¼" in bottom of box
- Openings over ¼" (for a listed fitting) in accordance with manufacturer's instructions

NEC 393 – Low Voltage Suspended Ceilings

New article covers the requirements for low voltage suspended ceiling power distribution systems.

NEC 404.2 (C) & IRC E4001.15 – Neutral Conductors on Light Switches

- Switches Controlling Lighting Loads
- New List (C) with 7 scenarios not requiring a neutral conductor.

NEC 406.3 (E) – Controlled Receptacle Marking

Receptacles controlled by automatic devices or features for energy management must be marked (icon required – text optional)

NEC 406.5 (E) – Receptacles in Countertops and Similar Areas

- Receptacles in countertops and similar work surfaces; applies to occupancy types.
- Receptacles in countertops shall be listed for the use as well as the attachment screws for the assemblies.

NEC 406.9(B)(1) & IRC E4002.9 – Extra Duty Hoods

- Receptacles in wet locations now require "extra duty hoods"
- Deleted wording "where supported from grade"
- Applies to 590.4 (d) (2)

NEC 406.15 & IRC 4002.15 – Dimmer Controlled Receptacles

Dimmer controlled receptacles are prohibited unless the plug/receptacle combination is a non-standard configuration type listed for such use.

NEC 408.4 (B) – Supply Source Identification

- Identification - Source Of Supply
- Now includes "switchgear" and required to identify all sources of power to equipment.

NEC 408.4 (B) – Retrofit Kit Listing

- Retrofit Kits added to the requirements
- Commercial and Residential

NEC 410.10 (F) - Luminaires under Roof Decking in Exposed or Concealed Locations

- Required to be installed 1½ inches below the lowest point of the decking.

NEC 422.5 – Readily Accessible GFCI Devices

New Section: Ground-Fault Circuit-Interrupter Protection

- All required GFCI devices shall be in a "Readily Accessible" location.

NEC 422 – GFCI Protection

New 422.23 requires GFCI protection for Tire Inflation Machines and Automotive Vacuum Machines.

NEC 422.49 – High Pressure Spray Washers

Revised language and added (1) & (2) that provides requirements for GFCI protection.

1) All single-phase equipment rated 250 volts or less.
2) All three phase equipment rated 208Y/120volts and 60 amps or less.

NEC 422.51 (B) – GFCI on Hardwired Vending Machines

(B) Other than Cord-and Plug-Connected

Hard-wired vending machines shall be connected to a GFCI circuit.

NEC 424.66 (A) & (B) – Duct Heaters

- (A) Duct Heaters: Working space for Duct Heaters to comply with 424.66.(B).
- (B) Limited Access
- (B)(1) The enclosure shall be accessible
- (B)(2) Width of working space shall be the width of equipment or 30"min; greater of two.
- (B)(3) All Doors/Panels open to 90 degrees
- (B)(4) Space in front of equipment shall comply with Table 110.26 (A)(1)

NEC 445 – Generators

- Section 445.11: Name plate ratings for generators rated 15KW and larger.
- Marking provided by manufacturer for bonding of the neutral conductor to the frame.

NEC 450 – Transformers

- 450.10 Grounding; (A) Separate connections for grounding and bonding conductors will now require a listed Terminal Bar installed for the connections.

NEC 501.40 – Multi-Wire Branch Circuits

- Multi-wire branch circuits - deleted this section entirely.
- Same sections were deleted from 502.40, 505.21, and 506.21.

NEC 516 – Revised Title

Article 516; Spray Applications, Dipping, Coating, and Printing Processes Using Flammable or Combustible Materials.

NEC 517.2 – Definitions

New Definitions:

- Support Space
- Wet Procedure Location

Revised Definitions:

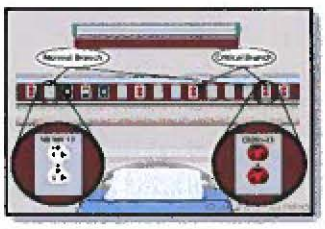
- Critical Branch
- Equipment Branch
- Life Safety Branch
- Patient Care Space
- General Care Space
- Patient Care Vicinity

Deleted Definitions:

- Emergency System and Wet Procedure Locations "from Patient Care Space only"

NEC 517.18 (A) – Patient Bed Location – Receptacle Identification

Patient Bed Location; The receptacles or cover plates shall have a distinctive color or marking and identify the panel and branch circuit feeding the receptacle.



NEC 517.18 (B) – General Care Patient Bed Location – Number of Receptacles

General Care receptacles has increased to eight (8) receptacles at each bed.

NEC 517.19 (B) – Critical Care Patient Bed Location – Number of Receptacles

Critical care areas receptacles has increased to fourteen (14) at each bed

NEC 517.19 (C) – Operating Room – Number of Receptacles

Each operating room shall have 36 receptacles.

NEC 517.30 (B) – Separate Branches

- **General:** (1) Separate Branches
- 517.32 Life Safety Branch: Emergency Lighting, exit lights, elevator, etc.
- **Critical Branch:** Task Illumination, Selected receptacles, and essential equipment.
- **Equipment Branch:** Any equipment the Hospital deems necessary. This is the first system to shut down automatically to maintain power to the Life Safety System.

NEC 517.41 (E) – Essential Branch Receptacles

Receptacle Identification: Receptacles fed from the essential electrical system shall have an illuminated face or indicator light to show power on the receptacles.

NEC 600.6 (A) (1) – Sign Enclosure Disconnecting Means

At Point of Entry to a Sign Enclosure: Disconnecting means located at point of feeder or circuit entry into the Sign.

NEC 646 New Article – Modular Data Centers

(1) General requirements
(2) Equipment
(3) Lighting
(4) Work Space

NEC 680.2 & IRC4201.2 – Storable/Portable Spas and Hot Tubs

New Definitions: "Storable/Portable Spas and Hot Tubs"

NEC 680.12 – Fountain Disconnect

Maintenance Disconnecting Means: Now adds "Fountains" to the existing list for the required Disconnect.

NEC 680.21 (C) – GFCI for Pool and Spa Motors

GFCI Protection: All Motors shall have GFCI protection. Previous language for 15 and 20 amperes was removed.

NEC 680.22 (A) (1) – Required Receptacles for Pools

Required Receptacle Locations: This title has been revised to remove "Dwelling Unit (s)" from the title. The requirements now apply to all swimming pools.

NEC 680.22 (B) (6) & IRC E4203.4.3 – Low Voltage Luminaires

Low Voltage Luminaires: "Listed" low voltage lighting meeting Definition in 680.2

NEC 680.42 (B) – Bonding Requirements/Exceptions

Bonding: Equipotential Bonding Grid not required if you meet the 4 specific conditions.

NEC New 700.8 – Surge Protection

Surge Protection: A Listed SPD shall be installed in or on all emergency systems switchboards and panelboards.

NEC 700.19 – Emergency Lighting and Power Circuits

Multiwire Branch Circuits: Emergency lighting and power circuits shall not be fed from multiwire branch circuits.

NEC 728 New Article – Fire Resistive Cable Systems

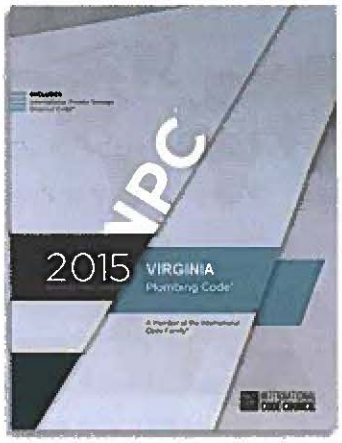
- 728.1 Scope
- 728.2 Definitions
- 728.4 General
- 728.5 Installations
- 728.60 Grounding
- 728.120 Marking

NEC 750 New Article – Energy Management Systems

- 750.1 Scope
- 750.2 Definitions
- 750.20 Alternate Power Sources
- 750.30 Load Management
- 750.50 Field Markings

Notes

2015 Virginia Plumbing Code



- ❑ 202 Alternate Onsite Nonpotable Water
- ❑ 202 Demand recirculation water system
- ❑ 202 Grease interceptor – Fats, oils and greases (FOG) disposal system
- ❑ 202 Onsite nonpotable water reuse system
- ❑ 202 Toilet facility
- ❑ 202 Waste receptor
- ❑ 202 Drinking fountains, Water coolers, and Water dispensers
- ❑ 403.3
- ❑ 404
- ❑ 410 .2
- ❑ 423.3
- ❑ 504.6
- ❑ 504.7.2
- ❑ 601.5
- ❑ 603.3
- ❑ 605
- ❑ 605.15.2
- ❑ 605.7
- ❑ 607.2.1
- ❑ 607.5
- ❑ 608.8
- ❑ 702.5
- ❑ 705.14.2
- ❑ 716
- ❑ 717
- ❑ 1002.1
- ❑ 1002.4, 1002.4.1
- ❑ 1003.3.7
- ❑ 1106.2
- ❑ Chapter 13
- ❑ Chapter 14

New Definition: Alternate Onsite Nonpotable Water

Alternate onsite nonpotable water Nonpotable water from other than public utilities, onsite surface sources and subsurface natural freshwater sources. Examples of such water are graywater, on-site reclaimed water, collected rainwater, captured condensate, and rejected water from reverse osmosis systems.

Alternative sources of water, which can be found on-site and used in these processes, may include:

- Rainwater and Stormwater
- Air Conditioner Condensate
- Foundation Drainage Systems
- Cooling Tower Blow Down
- On-Site Gray Water

Potential uses of alternate on-site sources of water include:

- Irrigation
- Cooling Tower Make-up Water
- Toilet and Urinal Flushing
- Ponds and Fountains
- Other uses not requiring potable water

New Definition: Demand Recirculation Water System

Demand Recirculation Water System: A water distribution system where one or more pumps prime the service hot water piping with heated water upon a demand for hot water.

New Definition: Grease Interceptor – Fats, Oils, and Greases (FOG) Disposal System

Fats, Oils and Greases (FOG) Disposal System. A plumbing appurtenance that reduces nonpetroleum fats, oils and greases in effluent by separation or mass and volume reduction.

Summary: Another type of grease interceptor, the Fats, Oils and Greases (FOG) disposal system, has been added to support the revised text in Section 1003.3.4 covering grease interceptors.

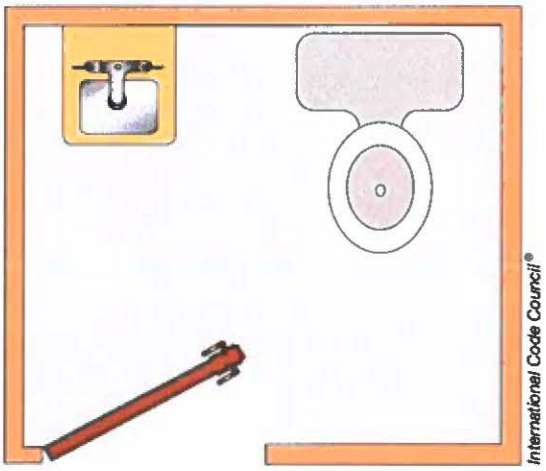
New Definition: On-Site Nonpotable Water Reuse System

On-Site Nonpotable Water Reuse System: A water system for the collection, treatment, storage, distribution, and reuse of nonpotable water generated on site, including but not limited to a gray water system. This definition does not include a rainwater harvesting system.

New Definition: Toilet Facility

Toilet Facility: A room or space that contains not less than one water closet and one lavatory

Significance: The phrase "toilet facility" is used over 25 times in the code. The common household name for a water closet is "toilet." Most manufacturers of water closets call the product a "toilet." Thus, the tendency by many readers of the code is to assume that a toilet facility is a room or space that has a "toilet" (water closet). This misunderstanding can create a problem where the code requires separate (male/female) "toilet" facilities.



Toilet facility

New Definition: Waste Receptor

Waste Receptor A floor sink, standpipe, hub drain or a floor drain that receives the discharge of one or more indirect waste pipes.

Significance: The phrase "waste receptor" is used in the code many times. The common assumption has been that a floor sink and a hub drain are waste receptors.

Standpipes and floor drains are rarely thought of as being waste receptors, but they are commonly installed for capturing flow from indirect waste pipes. The new definition includes all four items, and referencing waste receptors in the code text makes clear the restrictions for where these waste receptors can and cannot be located.

New Definitions: Drinking Fountain, Water Coolers, and Water Dispensers

Summary:

- These definitions for a drinking fountain, a water dispenser and a water cooler clarify Section 410 on drinking fountain requirements.
- The water dispenser definition expands the group of devices and apparatus that can be used as substitutions for 50 percent of the required number of drinking fountains.

Drinking Fountain. A plumbing fixture that is connected to the potable water distribution system and the drainage system. The fixture allows the user to obtain a drink directly from a stream of flowing water without the use of any accessories.

Water Dispenser. A plumbing fixture that is manually controlled by the user for the purpose of dispensing potable drinking water into a receptacle such as a cup, glass or bottle.

Water Cooler. A drinking fountain that incorporates a means of reducing the temperature of the water supplied to it from the potable water distribution system.

410.4 Substitution. Where restaurants provide drinking water in a container free of charge, drinking fountains shall not be required in those restaurants. In other occupancies where drinking fountains are required, water dispensers shall be permitted to be substituted for not more than 50 percent of the required number of drinking fountains.

403.3 Required Public Toilet Facilities

New Exception #2

Structures and tenant spaces intended for quick transactions, including takeout, pickup and drop off, having a public access area **less than or equal to 300 square feet.**

404 Accessible Plumbing Facilities

Summary: Reinforcement of the accessible requirements. For 2015, two new sections were added:

404.2 Accessible fixture requirements. Accessible plumbing fixtures shall be installed with the clearances, heights, spacings and arrangements in accordance with ICC A117.1 - 2009

404.3 Exposed pipes and surfaces. Water supply and drain pipes under accessible lavatories and sinks shall be covered or otherwise configured to protect against contact. Pipe coverings shall comply with ASME A112.18.9

410 Drinking Fountains in Small Occupancies

Change Type: Requirement moved from table footnote to its own code section

410.2 Small Occupancies Drinking fountains shall not be required for an occupant load of 15 or fewer.

423.3 Footbaths, pedicure baths, and head shampoo sinks

Change Type: New Section Added

423.3 Footbaths, pedicure baths, and head shampoo sinks The water supplied to specialty plumbing fixtures, such as pedicure chairs having an integral foot bathtub, footbaths, and head shampoo sinks, shall be limited to a maximum temperature of 120F by a water temperature limiting device that conforms to ASSE 1070 or CSA B125.3.

Kohler under-counter ASSE 1070 Compliant Mixing Valve

504.6 Temperature and Pressure Relief Discharge Piping (Item #10)

Change Type: Modification

Summary: The temperature and pressure relief valve discharge pipe termination must have an air gap suitable to protect the potable water supply distribution system of the building.

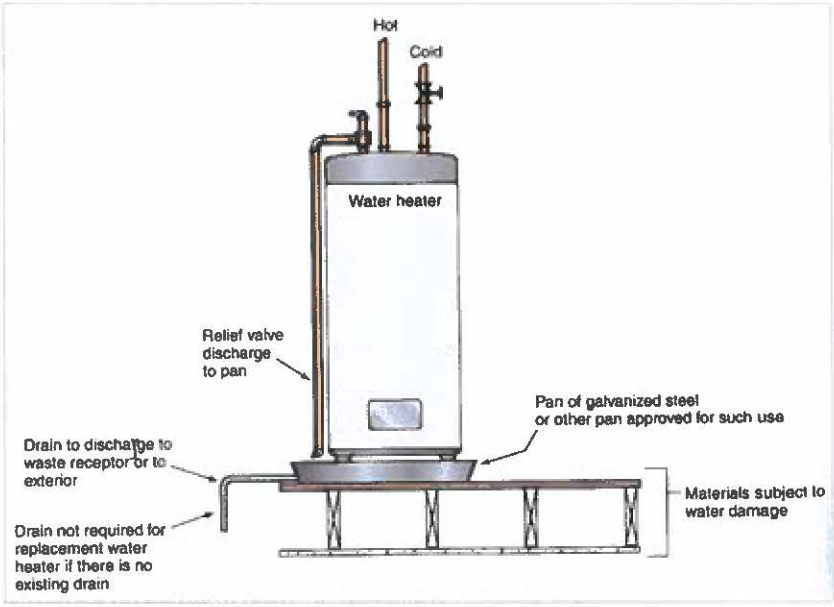
(Items 1-9 remain unchanged)

10. ~~Not~~ Terminate not more than 6 inches (152 mm) above and not less than two times the discharge pipe diameter above the floor or waste receptor flood level rim

504.7.2 Water Heater Pan Drain

Change Type: Modification

Summary: In a replacement water heater installation situation, there might not be a nearby drain point for a required pan for the water heater. This code modification allows a pan to not have a drain line if one is not present.



504.7.2 Pan Drain Termination. The pan drain shall extend full-size and terminate over a suitably located indirect waste Receptor or floor drain or extend to the exterior of the building and terminate not less than 6 inches (152 mm) and not more than 24 inches (610 mm) above the adjacent ground surface. Where a pan drain was not previously installed, a pan drain shall not be required for a replacement water heater installation.

Note: The USBC Chapter 1 already allows replacing like with like and would not trigger a pan itself if one was not required per the code it was installed under.

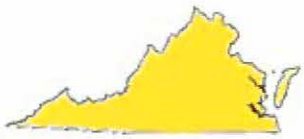
Chapter 6: Chapter 6 is Water Supply and Distribution

601.5 Rehabilitation of Piping Systems by Internal Lining

New language added for epoxy lining systems.

601.5 Rehabilitation of Piping Systems Where pressure-piping systems are rehabilitated using an epoxy lining system, such lining system shall comply with ASTM F 2831

603.3 Tracer Wire (VA)



New VA amendment

Change Summary:

- This requirement already exists in the 2012 VA Plumbing Code for Sanitary Drainage (703.6) and is now also a requirement for **water supply piping**.
- The requirements are identical to the drainage tracer wire requirements

605 Groove and Shouldered Mechanical Joints and Press-Connect Fittings

605.14.5 Press-Connect Joints.

Press connect joints shall conform to one of the standards listed in table 605.5. Press-connect joints shall be installed in accordance with the manufacturer's instructions. Cut tube ends shall be reamed to the full inside diameter of the tube end. Joint surfaces shall be cleaned. The tube shall be fully inserted into the press-connect fitting. Press-connect joints shall be pressed with a tool certified by the manufacturer.

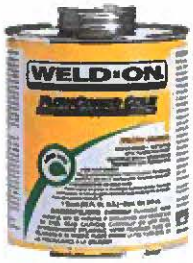
605.18.3 Groove and Shouldered Mechanical Joints

Grooved and shouldered mechanical joints shall comply with ASTM F1476, shall be made with an approved elastomeric seal, and shall be installed in accordance with the manufacturer's instructions. Such joints shall be exposed or concealed.

Table 605.5 Pipe Fittings (New Materials on left in blue)

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic	ASTM D 2468
Cast iron	ASME B16.4
Chlorinated polyvinyl chloride (CPVC) plastic	ASSE 1061; ASTM D 2846; ASTM F 437; ASTM F 438; ASTM F 439; CSA B137.6
Copper or copper alloy	ASME B16.15; ASME B16.18; ASME B16.22; ASME 16.26; ASME B16.51; ASSE 1061; ASTM F 1476; ASTM F 1548
Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE)	ASTM F 1986
Fittings for cross-linked polyethylene (PEX) plastic tubing	ASSE 1061; ASTM F 877; ASTM F 1807; ASTM F 1960; ASTM F 2080; ASTM F 2098; ASTM F 2159; ASTM F 2434; ASTM F 2735; CSA B137.5
Fittings for polyethylene of raised temperature (PE-RT) plastic tubing	ASTM F 1807; ASTM F 2098; ASTM F 2159; ASTM F 2735; ASTM F 2769
Gray iron and ductile iron	ASTM F 1476; ASTM F 1548; AWWA C110/A21.10; AWWA C153/A21.53;
Insert fittings for polyethylene/aluminum/polyethylene (PE-AL-PE) and cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX)	ASTM F 1974; ASTM F 1281; ASTM F 1282; CSA B137.9; CSA B137.10M
Malleable iron	ASME B 16.3
Metal (brass) insert fittings for polyethylene/aluminum/polyethylene (PE-AL-PE) and cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX)	ASTM F 1974
Polyethylene (PE) plastic pipe	ASTM D 2609; ASTM D 2683; ASTM D 3261; ASTM F 1055; CSA B137.1
Polypropylene (PP) plastic pipe or tubing	ASTM F 2389; CSA B137.11
Polyvinyl chloride (PVC) plastic	ASTM D 2464; ASTM D 2466; ASTM D 2467; CSA B137.2; CSA B137.3
Stainless steel (Type 304/304L)	ASTM A 312; ASTM A 778; ASTM F 1476; ASTM F 1548
Stainless steel (Type 316/316L)	ASTM A 312; ASTM A 778; ASTM F 1476; ASTM F 1548
Steel	ASME B16.9; ASME B16.11; ASME B 16.28; ASTM F 1476; ASTM F 1548

605.15.2 CPVC Solvent Cementing



Summary: This section has been updated to provide additional clarity.

- Instead of listing primer exceptions as it did previously, it requires joints be made **per manufacturer's instructions.**
- If a primer **is required**, it shall be applied and orange ASTM F 493 cement shall be used.
- Where such instructions allow for a one-step solvent cement, yellow in color and conforming to ASTM F 493, to be used, the joint surfaces shall not require application of a primer before the solvent cement is applied.
- Standards listed are same as 2012 code

605.7 Valve Compliance to Standards

Summary: All types of valves that supply drinking water must now comply with NSF 61. Standards for numerous types of valves have been added to the code.

Prior to the 2015 code, only ball valves, gate valves, butterfly valves, globe valves and plug valves that supplied drinking water were required to comply with NSF 61. Missing from this list were pressure-reducing valves, backflow-prevention valves, check valves, and solenoid valves. **ALL valves must now comply with NSF 61.**

607.2.1 Hot Water Circulation Systems

Change Type: Modification

Summary:

- Changes in the commercial portion of the *International Energy Conservation Code* (IECC) caused changes in this IECC-controlled section of the IPC.
- It clarifies that temperature maintenance systems must be turned off when there's no demand, and makes it clear to which occupancy types the code section applies

607.2.1 Circulation systems and heat trace systems for maintaining heated water temperature in distribution systems. For Group R2, R3 and R4 occupancies that are three stories or less in height above grade plane, the installation of heated water circulation and temperature maintenance systems shall be in accordance with Section R403.5.1 of the International Energy Conservation Code. For other than Group R2, R3 and R4 occupancies that are three stories or less in height above grade plane, the installation of heated water circulation and heat trace systems shall be in accordance with Section C404.6 of the International Energy Conservation Code.

607.2.1.1 Pump controls for hot water storage systems. The controls on pumps that circulate water between a water heater and a storage tank for heated water shall limit operation of the pump from heating cycle startup to not greater than 5 minutes after the end of the cycle.

607.2.1.2 Demand recirculation controls for distribution systems. A water distribution system having one or more recirculation pumps that pump water from a heated water supply pipe back to the heated water source through a cold water supply pipe shall be a demand recirculation water system. Pumps shall have controls that comply with both of the following:

1. The control shall start the pump upon receiving a signal from the action of a user of a fixture or appliance, sensing the presence of a user of a fixture, or sensing the flow of hot or tempered water to a fixture fitting or appliance.

2. The control shall limit the temperature of the water entering the cold water piping to 104°F (40°C).

607.5 Insulation of Hot Water Supply Piping

Change Type: Modification

Summary: Instead of listing requirements, this section now refers back to Energy code (IECC) and clarifies which IECC section to reference based on building type.

607.5 Insulation of piping. For other than Group R2, R3 and R4 occupancies that are three stories or less in height above grade plane, piping to the inlet of a water heater and piping conveying water heated by a water heater shall be insulated in accordance with Section C404.4 of the International Energy Conservation Code. For Group R2, R3 and R4 occupancies that are three stories or less in height above grade plane, piping to the inlet of a water heater and piping conveying water heated by a water heater shall be insulated in accordance with Section R403.5.3 of the International Energy Conservation Code.

608.8 Identification of Nonpotable Water

Change Type: Modification

Summary: Fixtures such as water closets and urinals that utilize nonpotable water must be identified with words and a symbol indicating that nonpotable water is being used. The color purple is established for identifying distribution piping conveying nonpotable water.

608.8 Identification of nonpotable water systems. Where nonpotable water systems are installed, the piping conveying the nonpotable water shall be identified either by color marking, metal tags or tape in accordance with Sections 608.8.1 through 608.8.2.3.

608.8.1 Signage required. Nonpotable water outlets, such as hose connections, open ended pipes and faucets, shall be identified with signage that reads as follows: "Non-potable water is utilized for [application name]. CAUTION: NONPOTABLE WATER – DO NOT DRINK." The words shall be legibly and indelibly printed on a tag or sign constructed of corrosion-resistant waterproof material or shall be indelibly printed on the fixture. The letters of the words shall be not less than 0.5 inch (12.7 mm) in height and in colors in contrast to the background on which they are applied. In addition to the required word-age, the pictograph shown in Figure 608.8.1 shall appear on the required signage.

FIGURE 608.8.1
PICTOGRAPH—DO NOT DRINK

608.8.2 Distribution pipe labeling and marking. Non-potable distribution piping shall be purple in color and shall be embossed, or integrally stamped or marked, with the words: "CAUTION: NONPOTABLE WATER – DO NOT DRINK" or the piping shall be installed with a purple identification tape or wrap. Pipe identification shall include the contents of the piping system and an arrow indicating the direction of flow. Hazardous piping systems shall also contain information addressing the nature of the hazard. Pipe identification shall be repeated at intervals not exceeding 25 feet (7620 mm) and at each point where the piping passes through a wall, floor or roof. Lettering shall be readily observable within the room or space where the piping is located.

608.8.2.1 Color. The color of the pipe identification shall be discernable and consistent throughout the building. The color purple shall be used to identify reclaimed, rain and gray water distribution systems.

608.8.2.2 Lettering size. The size of the background color field and lettering shall comply with Table 608.8.2.2. *(not shown – see full code section)*

608.8.2.3 Identification tape. Where used, identification tape shall be at least 3 inches (76 mm) wide and have white or black lettering on a purple field stating "CAUTION: NONPOTABLE WATER – DO NOT DRINK." Identification tape shall be installed on top of nonpotable rainwater distribution pipes, fastened at least every 10 feet (3048 mm) to each pipe length and run continuously the entire length of the pipe.

Chapter 7: Sanitary Drainage

702.5 Temperature Rating of Drainage Piping

Change Type: Addition

Summary: Wastewater having a temperature greater than 140°F (60°C) does not need to be cooled before it enters the drainage system if the drainage system piping is rated for the higher temperature.

702.5 Temperature rating. Where the waste water temperature will be greater than 140°F (60°C), the sanitary drainage piping material shall be rated for the highest temperature of the waste water.

705.11.2 (IPC) 705.14.2 (VPC) – Primer Exception for Solvent Cementing PVC 4 inches and smaller

Exception: A primer is not required for PVC where both of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM D 2564
2. The solvent cement is used only for joining PVC drain, waste, and vent pipe and fittings in non-pressure applications in sizes up to and including 4 inches (102mm) in diameter.

716 Vacuum Drainage Systems

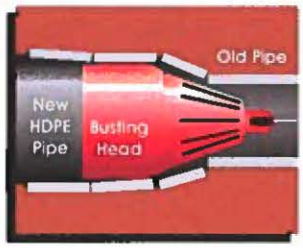
CHANGE TYPE: Addition

Summary: Vacuum drainage system provisions (as opposed to gravity drainage system provisions) have been moved from the appendix to the code.

717 / P3010 Replacement of Sewers by Pipe-Bursting Method

CHANGE TYPE: Addition

Replacement of building sewers by the pipe-bursting method has been used for many decades and is useful especially where excavation of the existing sewer is difficult and costly because of parking lots and other items on the ground surface that would need to be removed and replaced.



1002.1 Exception for Traps for Parking Garage Floor Drains

Change Type: Modification

Summary: Traps are not required for parking garage floor drains where the drains are connected to a storm sewer system.

Exceptions:

1-3 (no change to text)

4. Floor drains in multilevel parking structures that discharge to a building storm sewer shall not be required to be individually trapped. Where floor drains in multilevel parking structures are required to discharge to a combined building sewer system, the floor drains shall not be required to be individually trapped, provided that they connect to a main trap in accordance with Section 1103.1

1002.4, 1002.4.1 Trap Seal Protection against Evaporation

Change Type: Modification

Summary: Trap seal protection against evaporation can now be accomplished in a variety of ways including barrier type trap seal protection.

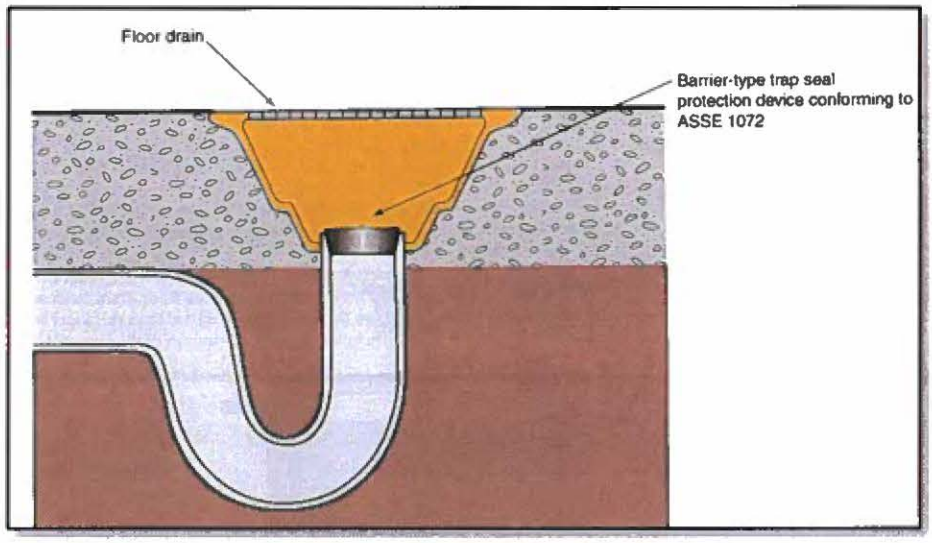
1002.4.1 Trap seal protection. Trap seals of emergency floor drain traps and trap seals subject to evaporation shall be protected by one of the methods in Sections 1002.4.1.1 through 1002.4.1.4.

1002.4.1.1 Potable water-supplied trap seal primer valve. A potable water-supplied trap seal primer valve shall supply water to the trap. Water-supplied trap seal primer valves shall conform to ASSE 1018. The discharge pipe from the trap seal primer valve shall connect to the trap above the trap seal on the inlet side of the trap.

1002.4.1.2 Reclaimed or gray water-supplied trap seal primer valve. A reclaimed or gray water-supplied trap seal primer valve shall supply water to the trap. Water-supplied trap seal primer valves shall conform to ASSE 1018. The quality of reclaimed or gray water supplied to trap seal primer valves shall be in accordance with the requirements of the manufacturer of the trap seal primer valve. The discharge pipe from the trap seal primer valve shall connect to the trap above the trap seal, on the inlet side of the trap.

1002.4.1.3 Waste water-supplied trap primer device. A waste water-supplied trap primer device shall supply water to the trap. Waste water-supplied trap primer devices shall conform to ASSE 1044. The discharge pipe from the trap seal primer device shall connect to the trap above the trap seal on the inlet side of the trap.

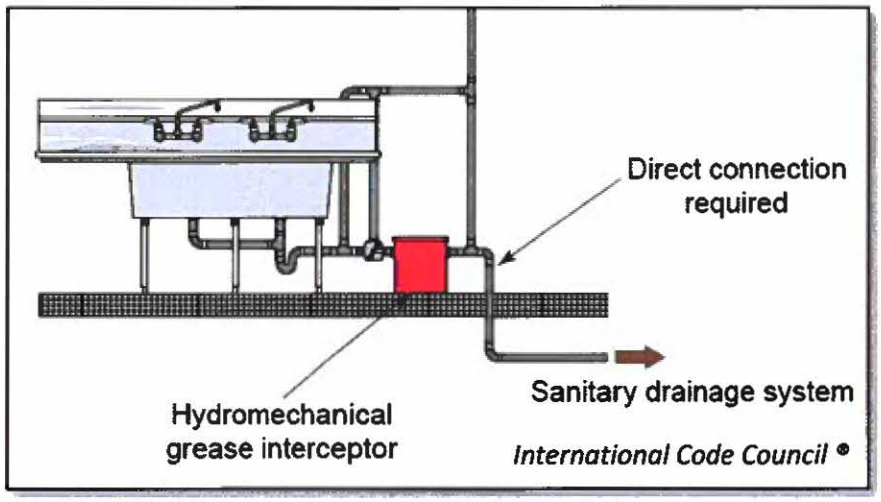
1002.4.1.4 Barrier-type trap seal protection device. A barrier-type trap seal protection device shall protect the floor drain trap seal from evaporation. Barrier-type floor drain trap seal protection devices shall conform to ASSE 1072. The devices shall be installed in accordance with the manufacturer's instructions.



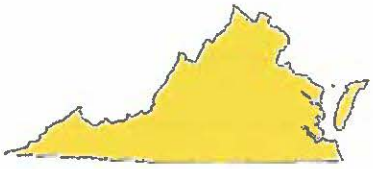
1003.3.7 Direct Connection of Grease Interceptor Discharge

CHANGE TYPE: Addition

1003.3.7 Direct Connection The discharge piping from a grease interceptor shall be directly connected to the sanitary drainage system.



1106.2 Vertical Conductors and Leaders (Storm Drainage)



Change Type: State amendment

Change Summary: This state amendment keeps the same language as in the 2012 VPC, which specifies that vertical connectors and leader sizing will continue to be based on the maximum projected roof area (and not flow rates of the piping as the 2015 IPC now specifies)

Chapter 13 – Nonpotable Water Systems

Change Type: Completely new chapter **in the ICC code ONLY**

Summary:

- Even though the IPC now has a chapter 13 with the same name as the VA version, there are **numerous significant VA state amendments**
- Always refer to the VA version of chapter 13 for Nonpotable Water Systems

Chapter 14 - Subsurface Landscape Irrigation System

Change type: Completely new chapter

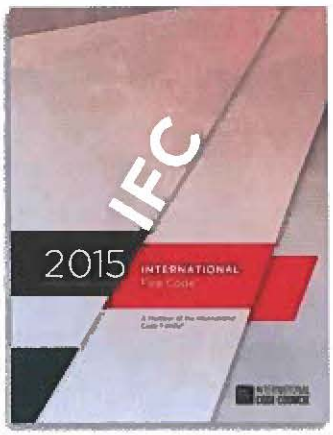
1401.1 Scope. The provisions of Chapter 14 shall govern the materials, design, construction, and installation of subsurface landscape irrigation systems connected to nonpotable water from on-site water reuse systems.

Summary: Section 1302.6 prohibits the storage of untreated gray water for more than 24 hours. Although untreated gray water could be discharged to the public sewer system (or a private sewage disposal system), another possible building site use for this water would be subsurface irrigation. Reusing gray water on site lessens the load on public sewer systems and septic tank systems, while at the same time adding beneficial nutrients to the soil and eventual recharging of local aquifers.

Notes

2015 Virginia Statewide Fire Prevention Code

❑ Overview	❑ 807
❑ 107.2(1)	❑ 901.8.2
❑ 107.2(2)	❑ 1031.3.1
❑ 301.3	❑ 2004.7
❑ 305.5	❑ 2808.3
❑ 312.3	❑ 3103.2
❑ 315.6	❑ 3103.2.1
❑ 319	❑ 3105
❑ 607.6	❑ 5706.1.1
❑ 609.3.3.2	❑ Appendices



Overview

- Unenforceable provisions relocated to a reference section
- Additional references added

107.2(1) Permits Required

- New item added to operational permits table allows localities to require operational permits for manufacture of restricted and unrestricted explosives.
- SFPC 5605.1.1 provides requirements for such permits when required.
- Exception for consumer use in accordance with this section and manufacturer's instructions

107.2(2) Permits Required

- New item added to operational permits table allows localities to require operational permits for Mobile Food Prep Vehicles that are equipped with appliances that produce smoke or grease laden vapors
- Not applicable to recreational vehicles used for private recreation
- SFPC 5605.1.1 provides requirements for such permits when required.

301.3 Occupancy

- Builder's owner or agent may request a certificate of occupancy (COO) if one is not available
- Change of occupancy must remain in site for reference

305.5 Unwanted Fire Ignitions

- New section allows the fire official to require acts or processes that cause repeated unwanted fires to be modified to prevent future fires

312.3 Other Barriers

- Fire code official may now approve barriers that resist, deflect, or visually deter vehicle impact, based on site-specific application and demonstrated design
- More performance based than previous code language

315.6 Storage in Plenums; and 605.12 Abandoned Wiring in Plenums

- Prohibits storage within air-handling plenums as defined in IFC Chapter 2, unless allowed by the applicable building code
- Unused wiring and abandoned materials must be removed
- Cables installed for future use may remain if tagged

319 Mobile Food Preparation Vehicles

- New section regulates mobile food prep vehicles equipped with appliances utilizing open flames or producing smoke/grease laden vapors
- Regulates exhaust hoods, fire protection, fuel, fuel supplies and storage, and other applicable items and systems.
- Permits required per 107.2

607.6 Water Protection of Hoistway Enclosures

- Water protection devices installed in fire service access elevator hoistways and occupant evacuation elevator hoistways must be maintained

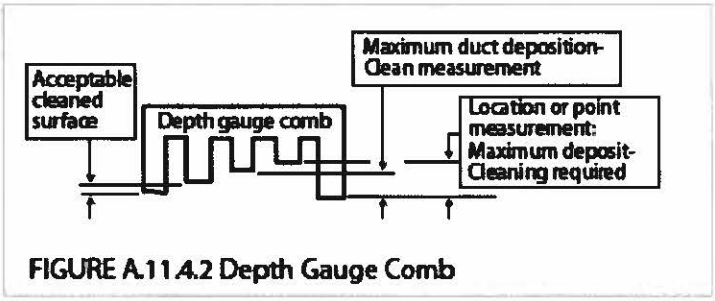
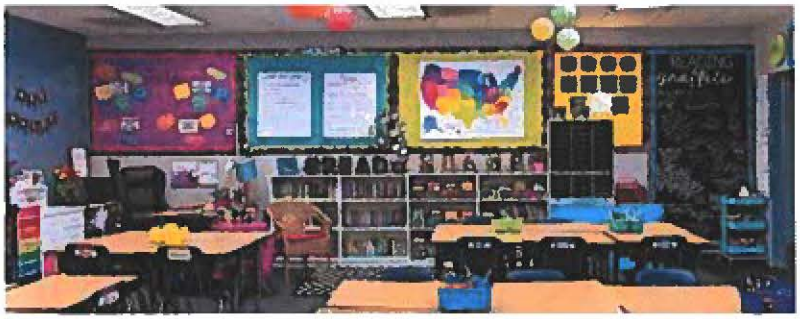


FIGURE A.11.4.2 Depth Gauge Comb

609.3.3.2 Grease Accumulation

- Language added providing guidance in determining the frequency and necessity for cleaning commercial hoods with the use of depth gauge combs



807 Decorative Material Other Than Decorative Vegetation in New and Existing Buildings

- Section reformatted for ease of use
- Sections 807.5.2.3 and 807.5.5.3 now limit combustible artwork and teaching materials in classrooms to not more than 50% of the specific wall area to which they are attached.
- 807.5.6 limits the quantities of combustible decorative materials in group R-2 dormitories

901.8.2 Removal of Existing Occupant-Use Hose Lines

- New section grants the Fire Official the authorization to permit the removal of existing occupant use hose line stations if they meet specific requirements:
  - Installation is not required by any codes;
  - Hose lines will not be utilized by trained personnel; and
  - All outlets are compatible with local fire department fittings

1031.3.1 Group I-2

- New section requires clear widths for aisles, corridors and ramps in I-2 occupancies
- Some exceptions for bed and stretcher movement
- Section refers to section 1020.2 for guidance, which states, "width and capacity of corridors shall be maintained in accordance with the applicable building code"

2004.7 Other Aircraft Maintenance

- New section addresses aircraft maintenance not addressed elsewhere in the SFPC
- Such activity shall be conducted in accordance with NFPA 410

2808.3 Size of Piles

- Regulates size of piles of storage and processing of wood chips, hogged material, fines, compost, and raw product associated with yard waste and recycling facilities
- Exception has changed to allow pile size to increase when a fire safety plan is provided, which includes the 5 key areas outlined within this section.

3103.2 Approval Required

- The size requirement for tents and membrane structures to receive the approval of the Fire Official is updated to 900 sqft. This is update is not an increase, but rather a revision to correlate with the requirement located in Virginia's Chapter 1, which superseded this section.
- All previous exemptions have been removed

3103.2.1 Multiple Tents

- New requirement that the aggregate of area of multiple tents separated by less than 12 feet shall not exceed 900 sqft unless approved in accordance with 3103.2

3105 Temporary Stage Canopies

- New section regulates operation and maintenance of temporary stage canopies
- Requires all documents to be submitted to building official where required by USBC
- Independent inspection reports shall be submitted to building and fire officials
- Means of egress shall comply with SFPC Ch. 10 and applicable building codes

5605.1.1 Permits (Manufacture, Assembly and Testing of Explosives, Explosive Materials and Fireworks)

- Provides requirements for permits required by section 107.2
- Lists 3 exceptions with additional requirements for each:
    1. Recreational use of reactive targets, when used in accordance with this section and manufacturer's instructions
    2. Agricultural or horticultural use ≥5 acres, when used in accordance with this section
    3. Manufactured by a certified blaster, performing business work, and in accordance with this section

5706.1.1 Mobile Fueling Operations

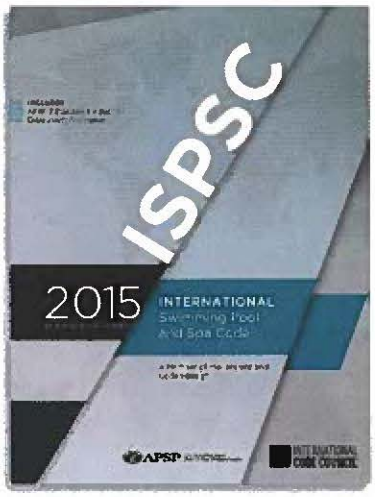
- New section prohibits mobile fueling delivery services
- Exceptions:
  - Highway vehicles in an emergency
  - On commercial, industrial, government sites
  - On farms, construction sites
  - Farm vehicles
  - Marine craft
  - Emergency refueling
  - Aircraft refueling

SFPC Appendices

- Many changes throughout

Notes

Swimming Pool and Spa Code



- ❑ Definitions
  - o Aquatic Vessel (removed)
  - o Deck
  - o Handhold
  - o Maintained Illumination
  - o Class F
  - o Safety Cover
  - o Outlet Cover
- ❑ 302.3 – Pipe, Fittings, and Components
- ❑ 303.1.1 – Heaters
- ❑ 303.2 – Portable Spas
- ❑ 303.3 – Residential Pools and Permanent Spas
- ❑ 305.2.9 – Equipment clear zone
- ❑ 306 – Decks
- ❑ 321 – Lighting
- ❑ 321.2 – Artificial Lighting Required
- ❑ 321.2.2 – Illumination Intensity
- ❑ 321.2.3 – Underwater Illumination
- ❑ 323 – Safety (Handrails)
- ❑ 402.14 – Springboard Fall Protection
- ❑ 412.2 – Emergency Signs
- ❑ 702.2.1 – Barrier Required
- ❑ 704 – Circulation Systems
- ❑ 810.2 – Pressure Test

Chapter 2 - Definitions

Aquatic Vessel – Term Deleted

- Replaced with "Pool or Spa"
- Large portion of the code marked as a result of this change.

Deck An area immediately adjacent to or attached to a pool or spa that is specifically constructed or installed for sitting, standing, or walking.

Handhold That portion of a pool or spa structure or a specific element that is at or above the design waterline that users in the pool grasp onto for support.

Maintained Illumination The value, in foot-candles or equivalent units, below which the average illuminance on a specified surface is not allowed to fall. *Maintained illumination* equals the initial average illuminance on the specified surface with new lamps, multiplied by the light loss factor (LLF), to account for reduction in lamp intensity over time.

Class F Public Pool

- Wading Pools
- Max depth is 18"
- See section 405

Safety Cover
Complete revision - Barrier language removed

- **Safety Cover** A structure, fabric or assembly, along with attendant appurtenances and anchoring mechanisms, that is temporarily placed or installed over an entire pool, spa or hot tub and secured in place after all bathers are absent from the water.

Outlet Fitting - Term Deleted

Suction Outlet: A submerged fitting, fitting assembly, cover/grate and related components that provide a localized low-pressure area for the transfer of water from a swimming pool, spa, or hot tub. Submerged suction outlets have also been referred to as main drains.

Swimming Pool – Term Deleted

- This term appeared in 2012 code but was not defined and directed us to either the public or residential swimming pool definition.
- Those definitions are still present and unchanged, with the exception of some minor changes to the definitions of classes of public pools and the addition of a type F (wading pool).

302.3 – Pipe, Fittings, and Components

- A second exception added for Onground Storable Pools.

303.1.1 – Heaters

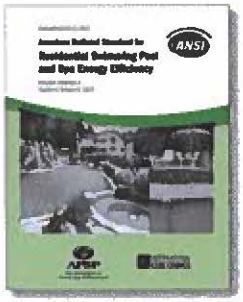
- Switch now required, integral or external
  - In addition to Circuit Breaker
  - For Maintenance purposes

303.2 – Portable Spas

- Follow APSP 14 for Energy Use

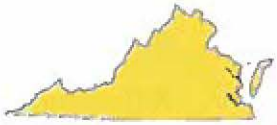
303.3 – Residential Pools and Permanent Spas

- Follow APSP 15 for Energy Use



305.2.9 – Equipment clear zone

- Virginia added "equipment" (to clarify that structures are not part of the clear zone)
- Requires 36" clearance between barrier and equipment **only when located on same property**



306 – Decks

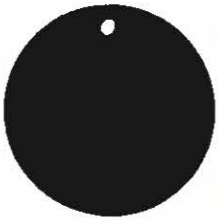
- **306.3 – Steps and Risers** Section now outlines specific requirements
- **306.4 – Handrails** Always required for ≥3 risers
- **306.9 – Valves under decks** New section specifies that any valves shall be accessible for operation, service, and maintenance

321 – Lighting

- Significantly expanded
- Now includes minimum requirements

321.2 – Artificial Lighting Required

- Enough light to see bottom of pool
- Suction outlets visible
- 8" diameter black disk



321.2.2 – Illumination Intensity

- *Maintained illumination*
- Horizontal foot candles
    - 10 fc outdoor pools
    - 30 fc indoor pools
    - 10 fc decks

321.2.3 – Underwater Illumination

- 8 FC at the water surface
- Not required if over 15 FC overhead
- Pool bottom must be visible

323.2.1 – Handrail Height

- Public Pools: 34"- 38" above step or ramp
- Residential pools: 30" - 38" above step or ramp

402.14 – Springboard Fall Protection

- Over 5' above pool deck require guards
- Guards on both sides of board
- Follow Manufacturer's Instructions

412.2 – Emergency Telephone Signs

- Within sight of main entry, and landline
- Pertinent information required

702.2.1 – Barrier Required (New Exception)

- Not required when complying with APSP-4
- Need Certification Statement from Manufacturer

704 – Circulation Systems

- Expanded for Clarity
- Follow Manufacturer's Instructions

810.2 – Pressure Test

- Pressure Test Requirement Deleted

Notes

Glossary

This glossary provides a convenient list of some common terms that are either new to the code or discussed along with these changes. Note that this glossary is not intended to be a complete list of terms and definitions. (See Chapter 2 of the appropriate code book for full definitions)

Alternate Onsite Nonpotable Water (Plumbing Code)

Nonpotable water from other than public utilities, onsite surface sources and subsurface natural freshwater sources. Examples of such water are graywater, on-site reclaimed water, collected rainwater, captured condensate, and rejected water from reverse osmosis systems.

Applicable Building Code (Property Maintenance Code)

The local or statewide building code and referenced standards in effect at the time the building or portion thereof was constructed, altered, renovated or underwent a change of occupancy. See Section 103 for the application of the code

Basic Care Space – [A Type of Patient Care Space] (Electrical Code)

Specific to Health Care Facilities (Article 517). A type of Patient Care Space. Space in which failure of equipment or a system is not likely to cause injury to the patients or caregivers but may cause patient discomfort.

Building construction conceptual/administrative processes (USBC)

Processes involving administration of the construction process such as would typically be performed working in a construction company or building inspection office, as opposed to working in the field directly constructing or supervising construction of the building.

Change of occupancy (Existing Building Code)

Either of the following shall be considered a change of occupancy where the current VCC requires a greater degree of accessibility, structural strength, fire protection, means of egress, ventilation or sanitation than is existing in the current building or structure:

(1) Any change in the occupancy classification of a building or structure;

(2) Any change in the purpose of, or a change in the level of activity within, a building or structure; NOTE: The use and occupancy classification of a building or structure shall be determined

Class F Public Pool (Pool and Spa Code)

Class F pools are wading pools and are covered within the scope of this code (ISPSC) as set forth in Section 405.

Coastal A Zone

Area within a *special flood hazard area*, landward of a V zone or landward of an open coast without mapped *coastal high hazard areas*. In a coastal A zone, the principal source of flooding must be astronomical tides, storm surges, seiches or tsunamis, not riverine flooding. During the base flood conditions, the potential for breaking wave height shall be greater than or equal to $1^1/_2$ feet (457 mm). The inland limit of the coastal A zone is (a) the Limit of Moderate Wave Action if delineated on a FIRM, or (b) designated by the authority having jurisdiction.

Coastal high hazard areas (Construction Code)

Area within the special flood hazard area extending from offshore to the inland limit of a primary dune along an open coast and any other area that is subject to high-velocity wave action from storms or seismic sources, and shown on a Flood Insurance Rate Map (FIRM) or other flood hazard map as velocity Zone V, VO, VE or V1-30

Coordination (Selective) (Electrical Code)

Localization of an overcurrent condition to restrict outages to the circuit or equipment affected, accomplished by the selection and installation of overcurrent protective devices and their ratings or settings for the full range of available overcurrents, from overload to the maximum available fault current, and for the full range of overcurrent protective device opening times associated with those overcurrents.

Cost of Such Demolition or Emergency Repairs (Property Maintenance)

The costs shall include the actual costs of the demolition or repair of the structure less revenues obtained if salvage was conducted prior to demolition or repair. Costs shall include, but not be limited to...(see code book for full definition)

Critical Branch (Electrical Code)

Specific to Health Care Facilities (Article 517). A system of feeders and branch circuits supplying power for task illumination, fixed equipment, select receptacles, and select power circuits serving areas and functions related to patient care and that is automatically connected to alternate power sources by one of more transfer switches during interruption of normal power source.

Critical Care Space (A Type of Patient Care Space) (Electrical Code)

Specific to Health Care Facilities (Article 517). A type of Patient Care Space. Space in which failure of equipment or a system is likely to cause major injury or death to patients or caregivers

Cross-laminated timber (Construction/Residential Codes)

A prefabricated engineered wood product consisting of at least three layers of solid-sawn lumber or structural composite lumber where the adjacent layers are cross-oriented and bonded with structural adhesive to form a solid wood element. Often referred to as "C.L.T."

Deck (Pool and Spa Code)

An area immediately adjacent to or attached to a pool or spa that is specifically constructed or installed for sitting, standing, or walking.

Direct burial pole (USBC)

A pole of any material where the pole itself is not an assembly of parts, though cross arms and support cables may be attached, which is directly buried in the ground with or without concrete installed around the buried portion but not bolted onto a pre-placed footing.

Equipment Branch (Electrical Code)

Specific to Health Care Facilities (Article 517). A system of feeders and branch circuits arranged for delayed, automatic, or manual connection to the alternate power source and that serves primarily 3-phase power equipment.

Existing building (Existing Building Code)

A building for which a legal certificate of occupancy has been issued under any edition of the USBC or approved by the building official when no legal certificate of occupancy exists, and that has been occupied for its intended use; or, a building built prior to the initial edition of the USBC

General Care Space (A Type of Patient Care Space) (Electrical Code)

Specific to Health Care Facilities (Article 517). A type of Patient Care Space. Space in which failure of equipment or a system is likely to cause minor injury to patients or caregivers

Handhold (Pool and Spa Code)

That portion of a pool or spa structure or a specific element that is at or above the design waterline that users in the pool grasp onto for support.

Historic Building (Property Maintenance Code)

Any building or structure that is one or more of the following:

1. Listed or certified as eligible for listing, by the State Historic Preservation Officer or the Keeper of the National Register of Historic Places, in the National Register of Historic Places.
2. Designated as historic under an applicable state or local law.

Intersystem Bonding Termination (Electrical Code)

A device that provides and means for connecting intersystem bonding conductors for communications systems to the grounding electrode system.

Life Safety Branch (Electrical Code)

Specific to Health Care Facilities (Article 517). A system of feeders and branch circuits supplying power for lighting, receptacles, and equipment essential for life safety that is automatically connected to alternate power sources by one or more transfer switches during interruption of the normal power source.

Maintained (Property Maintenance Code)

To keep unimpaired in an appropriate condition, operation, and continuance as installed in accordance with the applicable building code, or as previously approved, and in accordance with the applicable operational and maintenance provisions of this code.

Maintained Illumination (Pool and Spa Code)

The value, in foot-candles or equivalent units, below which the average illuminance on a specified surface is not allowed to fall. Maintained illumination equals the initial average illuminance on the specified surface with new lamps, multiplied by the light loss factor (LLF), to account for reduction in lamp intensity over time.

Mobile food preparation vehicles (Fire Code)

Vehicles and enclosed trailers able to be occupied by persons during cooking operations that contain cooking equipment that utilize open flames or produce smoke or grease laden vapors for the purpose of preparing and serving food to the public. Vehicles used for private recreation shall not be considered mobile food preparation vehicles.

Nonstructural concrete (Construction Code)

Any element made of plain or reinforced concrete that is not part of a structural system required to transfer either gravity or lateral loads to the ground.

Patient Care Space (Electrical Code)

Specific to Health Care Facilities (Article 517). Space within a health care facility wherein patients are intended to be examined or treated. This term has 4 sub-definitions: Basic Care Space, General Care Space, Critical Care Space, and Support Space. See separate definition for each.

Patient Care Vicinity (Electrical Code)

Specific to Health Care Facilities (Article 517). A space, within a location intended for the examination and treatment of patients, extending 1.8m (6ft) beyond the normal location of the patient bed, chair, table, or treadmill, or other device that supports the patient during examination and treatment and extending vertically to 2.3m (7'6") above the floor.

Photovoltaic (PV) Module (Construction Code)

A complete, environmentally protected unit consisting of solar cells, optics and other components, exclusive of tracker, designed to generate DC power when exposed to sunlight

Photovoltaic (PV) panel (Construction Code)

A collection of modules mechanically fastened together, wired and designed to provide a field-installable unit.

Photovoltaic (PV) panel system (Construction Code)

A system that incorporates discrete photovoltaic panels, that converts solar radiation into electricity, including rack support systems

Photovoltaic (PV) Shingles (Construction Code)

A roof covering resembling shingles that incorporates photovoltaic modules

Plastic Composite (Construction Code)

A generic designation that refers to wood/plastic composites and plastic lumber.

Plastic Lumber (Construction Code)

A manufactured product made primarily of plastic materials (filled or unfilled) which is generally rectangular in cross-section.

Plenum [M] (Fire Code)

An enclosed portion of the building structure, other than an occupiable space being conditioned, that is designed to allow air movement and thereby serve as part of an air distribution system

Pollution Control Unit (Mechanical and Fuel Gas Codes)

Manufactured equipment that is installed in a grease exhaust duct system for the purpose of extracting smoke, grease particles, and odors from the exhaust flow by means of a series of filters.

Repair (Existing Building Code)

The reconstruction or renewal of any part of an existing building for the purpose of its maintenance or to correct damage.

Safety Cover (Pool and Spa Code)

A structure, fabric or assembly, along with attendant appurtenances and anchoring mechanisms, that is temporarily placed or installed over an entire pool, spa or hot tub and secured in place after all bathers are absent from the water.

Separately Derived System (Electrical Code)

An electrical source, other than a service, having no direct connection(s) to circuit conductors of any other electrical source other than those established by grounding and bonding connections.

Suction Outlet (Pool and Spa Code)

A submerged fitting, fitting assembly, cover/grate and related components that provide a localized low-pressure area for the transfer of water from a swimming pool, spa, or hot tub. Submerged suction outlets have also been referred to as main drains.

Support Space (A Type of Patient Care Space) (Electrical Code)

Specific to Health Care Facilities (Article 517). A type of Patient Care Space. Space in which failure of equipment or a system is not likely to have a physical impact on patients or caregivers

Temporary stage canopy (Fire Code)

A temporary ground-supported membrane-covered frame structure used to cover stage areas and support equipment in the production of outdoor entertainment events

Wet Procedure Location (Electrical Code)

Specific to Health Care Facilities (Article 517). The area in a patient care space where a procedure is performed that is normally subject to wet conditions while patients are present, including standing fluids on the floor or drenching of the work area, where either such condition is intimate to the patient or staff.

Wood/Plastic Composite (Construction Code)

A composite material made primarily from wood or cellulose-based materials and plastic.

Work area (Existing Building Code)

That intended room, space, or portion of a building or structure where a wall or walls are added, relocated, or removed. Work area excludes (i) the addition or elimination of any door or window; (ii) the reconfiguration or extension of any system; (iii) the installation of any additional equipment; (iv) the removal of finished flooring or ceiling materials; (v) adjacent rooms or other rooms, spaces or portions of the building or structure where incidental work entailed by the intended work must be performed; and, (vi) portions of the building or structure where work not initially intended is specifically required by this code.

Special Thanks to Contributors

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- The Virginia Elevator Safety Association
- The Virginia Fire Prevention Association

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Training Certificate

DHCD Continuing Education Units
VBCOA Annual School & Conference
October 14 – 16, 2018
Williamsburg Lodge, Williamsburg

Use this certificate to track attendance at the sessions listed below. Keep a copy for your records.

Your name: _____Locality_____

Sunday, October 14, 2018	**Time of Session**	**Number of CEUs**	**Initial sessions attended**
Nominations Committee	8 am - 10 am	2.0 hours	
Regional Chairs Meeting	10 am – 12 noon	2.0 hours	
Board of Directors Meeting	1 pm – 4.30 pm	3.5 hours	
Nomination Committee Meeting	4:30 pm – 6 pm	1.5 hours	
Monday, October 15, 2018			
Annual Business Meeting	8 am – 11 am	3.0 hours	
Solutions for Classroom Doors	11 am – 12 noon	1.0 hours	
Think Like A Politician	1 pm – 4 pm	3.0 hours	
Outcomes of ICC Tall Wood Ad hoc Committee	1 pm - 3 pm	2.0 hours	
WFCM Significant Changes to High Winds Guides	3 pm - 4 pm	1.0 hours	
2015 Code Change Training IBC & IRC**	1 pm - 4 pm		
Energy Code Compliance Methods	1 pm - 2 pm	1.0 hours	
NFPA 285Code Compliance	2 pm – 3 pm	1.0 hours	
Third Party Plan Review/Inspections	3 pm – 4 pm	1.0 hours	
Tuesday, October 16, 2018			
USP 101 Connector Basics	8 am- 9 am	1.0 hour	
USP 601 Metal Connector Performance with Preservative Treated Wood	9:15 am-10:15 am	1.0 hour	
USP 301 Intro to Wind Design in Residential Wood Frame Construction	10:30 am -11:30 am	1.0 hour	
Flood Management Concepts For Building Officials *	8 am - 12 pm	4.0 hour	
2015 Virginia USBC Edition, Special Inspection Process	8 am - 12 pm	4.0 hours	
2015 IBC Essentials For Wood Construction	8 am – 9:30 pm	1.5 hour	
Deck Construction, DCA6-15	10 am – 11:30 am	1.5 hour	

2015 Existing Building Code	1 pm – 4 pm	3.0 hours	
Exceptional Customer Service With Difficult Customers *	1 pm – 4 pm	3.0 hours	
2015 CCT Administrative**	1 pm – 4 pm		

*ICC Preferred Provider Credits Available

** Code Change Trainings (CCT) are requirements no CEU's will be given